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ABSTRACT

This paper reports the results of a study conducted to: (1) design an instructional sequence to teach selected nursing curriculum development facts; (2) bring individual nursing instructors to a mastery level knowledge of basic theoretical models for nursing; and (3) demonstrate the applicability of the independent study approach to nursing education concepts and curriculum development. An instructional sequence on nursing education concepts was designed. Eighteen full- and part-time nursing instructors and a control group of baccalaureate holders were pre-tested on nursing education concepts. After completing the criterion-referenced instructional sequence, the nursing instructors evidenced a learning gain of from 15 to 65%; 11 of the nursing instructors and four control group members attained 80% mastery of the subject matter. Evaluation by the participants indicated that the self-paced programmed instruction facilitated the acquisition of nursing education facts. The use of mastery tests to identify the degree of knowledge of nursing education concepts held by newly-appointed nursing instructors, and use of the developed instructional sequence for orientation of new nursing instructors were recommended. Data are presented in tabular form and the instructional sequence is appended. (Author/JDS)

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ASSESSMENT OF LEARNING GAIN OF NURSING FACULTY MEMBERS FOLLOWING COMPLETION OF A SELF-INSTRUCTIONAL SEQUENCE ON NURSING EDUCATION CONCEPTS

by

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INTRODUCTION

JUSTIFICATION OF THE STUDY

The nursing program at Delaware County Community College is approved by the State Board of Nurse Examiners and is accredited by The National League for Nursing, Department of Associate Degree Programs. Both of these agencies, although not responsible to or for the educational program, do exert a powerful influence on the nursing education programs of community colleges. The National League for Nursing, established for the purpose of improving standards of education for nurses, has been designated as the accrediting agency for nursing education programs. Appropriate evaluative criterion and accreditation commensorate with the importance of Associate Degree educational programs to meet the pressing needs and demands for quality community college education is of the utmost importance according to Baird (1966). Trani and Donald (1975) state:

> "The National League for Nursing provides an excellent system for assessing the existing and potential strength of institutions through self-evaluation based on established criteria."

The program of studies is evaluated as to philosophy, objectives, purpose and conceptual framework by the faculty prior to an accreditation visit. The third edition of the Criteria for the Evaluation of Educational Programs in Nursing Leading to An Associate Degree lists a guideline for self-evaluation relative to the program of learning as:

> "The rationale and the conceptual framework of the organization and development of the program of learning are clearly stated."

The educational institution through the report of self-evaluation provide evidence of the conceptual framework used as a basis for the program of learning. Hodgman (1973) defined a conceptual framework as:

> "...a structure in which a complex of ideas is united so as to portray a large general idea."

The faculty in completing the self-evaluation report for The National League for Nursing must use the Guidelines published in 1973. The faculty revised the philosophy and objectives of the program, but have yet to identify the conceptual framework used as a basis for the program of learning. Some faculty members are unfamiliar with the meaning, value and utilization of a conceptual framework in the nursing curriculum. They are also unfamiliar with educational terminology, nursing theories and curriculum development. Additionally, some are unaware of the essential components of the Criteria for the Evaluation of Educational Programs Leading to An Associate Degree. Understanding of the criteria for self-evaluation, as well as an understanding of basic nursing education concepts is imperative if an effective evaluation of the total program is to be accomplished.

Perusal of the current course outlines for Nursing I, II, III and IV reveal little continuity, reinforcement or integration of content. One area identified by a nurse educator in an analysis of the Delaware County Community College nursing curriculum was the lack of a conceptual framework upon which the program of learning is based. The program of learning is fragmented. Four distinct courses in nursing can be identified which have little or no relationship or continuity. There is no evidence that a conscious, deliberate

effort for a unified approach to curriculum development was attempted. Cognizant of the need for the nursing faculty to understand educational concepts (i.e., nursing education terms, theories, conceptual framework and criteria for self-evaluation), a self-instructional program will be developed. Additional factors indicating the need to develop an effective and economical way to teach curriculum development facts are: amount of information available to be communicated; the development of a number of theoretical models for nursing practice; the limited time available for full-time faculty with teaching responsibility for self-development; the need to involve faculty in self-learning and the need for the faculty member to learn at a rate of speed individually appropriate and at a conveniently scheduled time to accomodate the faculty member..

Three related purposes will be achieved by the project:

1. Design (construct) instructional sequences to teach selected curriculum development facts.
2. Bring the individual nursing instructor to a mastery of the purpose, value and potentiality of the conceptual framework and an understanding of basic theoretical models for nursing practice in the shortest time possible.
3. Demonstrate the applicability of the independent study approach for learning facts and information regarding nursing education concepts and curriculum development.

BACKGROUND AND SIGNIFICANCE

The health delivery system of this country is being closely scrutinized locally, regionally and nationally. Accessibility to quality health care is now viewed as a birthright, rather than a privilege. The nature and characteristics of the roles for which the graduate nurse are prepared deserve attention. There is a growing community awareness of a need for members of the nursing profession to practice that which is relevant to the client. There has been a change in the scope of both nursing function and concern. Nursing has been assigned by society the task of assessing patient's needs, designing and implementing care plans to meet those needs, participating as a member of an interdisciplinary team in providing health care and additionally, responsibility for instructing patients and others in the maintenance of health. Lysaught, et al (1972) identified that from society's viewpoint, it wants the nurse to:

> "...have a keen sensitivity to the patient's wants, a comprehensive knowledge of procedures and technology and a clear grasp of the behavioral and physical sciences that provide a basis for judgment."

To provide equitable nursing care for all, it will be necessary that nurses graduating from educational programs be able to cope with the needs of a changing society. Nurse educators must extract from the basis of nursing knowledge that which is relevant both to nursing's purpose and to today's client and demonstrate how that knowledge can be translated into improved practice. Curriculum design therefore should be responsive to the multiple situational factors, trends within the community and within the field of health,

particularly nursing. Increasing amounts of knowledge in medicine, in the natural and behavioral sciences and the need to develop a futuristic curriculum have increased the need for more precise selection of content for the nursing education program. As a means of securing high selectivity, a conceptual framework must be selected to identify how the faculty perceive nursing... a descriptive model of what the faculty think IS nursing practice. All nursing educators have a concept of nursing practice. Reilly (1975) states that proponents of conceptual models of nursing practice are seeking to make nurse educators aware of these private images. A well ordered concept of nursing practice will provide a more unified approach to the ordering and selecting of theoretical content, including the placement of courses and learning experiences suitable from the natural, behavioral and humanistic sciences. Further, Neuman and Young (1972) note that the nursing model selected by the nursing faculty provides the conceptual basis, needed unity, coordination and integration for curriculum development. Additionally, the Nursing Development Conference Group (1973) state:

> "The elements of a general concept of nursing: (a) give direction to the selection and structuring of nursing content, (b) guide in the identification of content which is foundational to nursing."

Choosing a conceptual framework consistent with the stated philosophy, purpose and objectives of the nursing education program involves a value judgment. A decision must be made by the faculty as to what should be taught. Essential components must be chosen. Concepts should be selected having relevancy to nursing practice. Choices must be narrowed to what knowledge has the most

worth. Herrick and Tyler (1950) state that a conceptual framework for curriculum design serves to:

(1) identify critical concepts and the generalizations that underlie them;

(2) point up the interrelationships among these critical concepts; and

(3) suggest the approaches needed to develop the curriculum design.

Writings by Emans (1966) indicate his belief that a conceptual framework would identify important elements of the curriculum and the relationship between these elements. It would indicate the organizational principles and requirements for its operation. Conley (1973) states:

> A conceptual frame of reference of the object and process of nursing is needed to provide a guideline for the selection of content which in turn gives direction to the formulation of the objectives of the program. ....the specification of objectives in terms of behavioral end products, that is, what the student does at the end of the instructional program, is made in relation to the predetermined conceptual framework of nursing practice.

The conceptual framework serves to guide and direct the curriculum. Faculty need to identify the concepts they believe relevant to nursing practice and how the concepts relate to each other. A conceptual model provides a perspectus, a way of looking at nursing. Reilly (1975) identified a difference between a conceptual framework curriculum and an integrated curriculum. She states:

> All conceptual framework curriculum are integrated, but not all integrated curricula are conceptually based. The difference relates to the unifying components and the consistency with which that component maintains the focus throughout the program.

Thus, if the faculty focus on stress/adaptation as the unifying

component, then stress/adaptation will be included in the study of all age groups; stages of health and illness; interpersonal relationships, etc. throughout the nursing courses. If developmental tasks is used, then the tasks of each age group must deal with each element of the program (i.e., stress/adaptation factors, the health illness continuum, disease processes, interpersonal relationships, etc.) as these are studied within the nursing courses. In an integrated curriculum, concepts are integrated. However, an integrated program does not necessarily define the components to be integrated and does not demand that consistency in these components be maintained throughout the program.

Hodgman (1973) also indicates that the conceptual framework guides the selection of nursing theory and gives meaning to the learning experiences chosen to correlate with that theory. The sequences of required courses become a natural outcome of the chosen framework and the rationale for each course is inherently present in the framework used. Increasingly, too, the identification of a conceptual framework for the nursing curriculum has been emphasized in nursing education journals. The Criteria for The Evaluation of Educational Programs Leading to An Associate Degree (1973) include a criterion stating:

> that the rationale and the conceptual framework of the organization and development of the program are clearly stated.

A recurring problem for educational directors is faculty turnover and inexperienced faculty in relation to curriculum planning and development. Yet, faculty are accountable for both. Deans and

Directors of nursing education programs are responsible for guiding faculty in the evaluation of the program of learning. The director is also responsible for staff development and an ongoing inservice education program. Faculty members in many programs are specialists in one area of expertise, (i.e., medical-surgical nursing) but they have a limited background in curriculum development and evaluation. Faculty members are generally committed to quality education and are willing to participate in program evaluation and revision. However, they may lack the needed skills and basic knowledge necessary to accomplish these goals. Programmed instruction related to nursing education concepts (i.e., conceptual framework and theoretical models for nursing) can prepare faculty members for their responsibility for curriculum development, evaluation and revision. Hodgman (1973) stresses that a conceptual framework chosen or synthesized for the purpose of building curriculum should make sense to faculty and to students in a particular education setting. The following must be considered when attempting to integrate and unify a nursing curriculum by means of a conceptual framework: (a) the philosophy, objectives and stated purpose of the parent institution; (b) the philosophy of the nursing program; the realities of nursing practice as viewed by the faculty; (c) standards for safe nursing practice; (d) the responsibilities of the nurse as mandated by the state legislature; (e) factors that influence the health needs of the recipients of health services; (f) the identification of who recipients of health services will be; and (g) the political relationship between nursing faculty and faculty from other disciplines within the college.

To facilitate the evaluation of the nursing education program

it is crucial that nursing faculty be prepared for this important function in the most economical manner possible. Autotutorial instruction is the method chosen to provide efficient, effective instruction for Delaware County Community College nursing faculty to learn educational concepts basic to curriculum development and/or revision. Based upon principles of behavior modification, this reinforcement technique will permit faculty members to study necessary information at a time convenient to them and for the amount of time required to achieve the objectives of the instructional sequence.

An instructional sequence designed to provide immediate feedback can elicit student response and participation throughout the program. In this teaching-learning system, content is broken down into small distinct steps and organized in a logical sequence, in a manner in which it can be learned easily be the student.

The concepts and methods of programmed instruction was introduced to nursing education by Seedor (1966). A visual-verbal program using both linear and branching styles was constructed by Krueger (1971) to teach scientific knowledge and motor skills to nursing students. Evaluation of the program results showed that participants using the program acquired most of the scientific facts and principles as well as the motor skills intended by the program. Additionally, the program enabled each participant to determine the amount of self directed learning activity necessary to learn the programmed material.

A programmed unit on Radiation Therapy developed by Crayton

and Lysaught (1964) was field tested. It was determined that the unit could be taught as effectively as a traditional lecture presentation of materials. Hart (1966) developed a programmed unit concerned with the science of weights and measures as they relate to the mathematics of drug dosages and solutions. A comparative study demonstrated that the experimental groups' achievement was higher than that of the control group.

Programmed instruction has been developed and tested on almost all curricula. Learning programs can be constructed for a variety of subjects that range from simple skills to complex kinds of behavior. They can be more effective than traditional teacher instruction. During a seminar conducted by the Foundation for Research on Human Behavior (1960), Gagne remarked:

> Some psychologists believe that the achievement of new ideas can itself be powerful motivating force and programming can make use of this factor.....It does have an internal motivating effect.....like the book the reader couldn't put down, why not a learning program so intrinsically exciting the learner can't put it down?

The program deemed most appropriate for an educational sequence on educational concepts basic to curriculum development for an Associate Degree nursing program is the linear or single step type. The linear type of program is based upon Skinner's theory of small step progression of material in a logical sequence (Conley 1973). Reinforcement is central to this theory and will be built into the program through the sequencing of items. This should increase the liklihood that the faculty participant will get the correct answer, thus providing immediate positive reinforcement.

Another psychological concept used in the design of the instructional sequence will be that of the nature of attending or responding. The program will be set up in such a manner that participants will be forced to respond to each element. The program will be developed in booklet form for ease of use.

There are definite advantages to both the student and the educational program to develop an instructional sequence for staff development. To paraphrase O'Connell (1973) the key advantages for staff development in an Associate Degree nursing program are:

1. Competent 'instructors' (i.e., program) are always available.
2. A nursing program need not take nursing instructors from the clinical area as a group for staff development.
3. As few as one instructor at a time can be given instruction, as long as the instructional sequence is available.
4. 'Fast' learners can learn more in a given time period.
5. 'Slow' learners can learn if given the time to do so.
6. Staff development can be accomplished at a lower cost with higher efficiency.

More important than the style used in developing the instructional sequence is the decision made as to what is to be communicated to the learner. Equally important is what the learner is to achieve in each sequence. Gagne (1973) states that in a linear model each frame serves to:

1. Define new terms.
2. Define goals.
3. Recall previously learned ideas.
4. Guide the learner's thinking.
5. Provide practice for newly acquired principles.

General learning outcomes expected will be identified. Additionally, specific learning tasks will be identified on which

the learners are to demonstrate performance at the end of the learning experience to show that they have achieved the instructional objectives. Gronlund (1973) identified two levels of learning (e.g. mastery level, the learning of minimal essentials and developmental level, a level of excellence beyond the mastery of minimal essentials). Achievement will be measured on the basis of whether the participant learned, whether he met the objectives (criterion) for the sequence and whether a particular specified level of proficiency (80%) was reached. The purpose of staff development is individual intellectual growth and development of faculty members. It is critical that nursing instructors possess certain competencies regarding educational concepts in order to fulfill their responsibilities for curriculum development and/or revision. To ascertain the level of learning by faculty participants, criterion referenced measurement will be used. Popham (1971) stated:

> In situations where one is interested only in whether an individual possesses a particular competence, criterion referenced measures are suitable.

Criterion referenced tests will be developed both for pretesting and post-testing of learners using the instructional sequence developed for this study. Gronlund (1973) postulates that:

> Essentially, this technique involves an interpretation of test results in terms of the types of learning tasks the students have achieved in some clearly defined area.

The tests will be designed to measure predetermined specific learning outcomes. The expected level of performance to be achieved by each student for each test will be described. According to Gronlund

(1973), a specific criterion behavior provides an absolute standard against which an individual's achievement can be compared. Popham (1971) states:

> A criterion referenced test is used to identify an individuals status with respect to an established standard of performance.

In constructing the test items, the principles of criterion referenced testing as described by Gronlund (1973) will be followed:

1. Criterion referenced testing requires a clearly defined and delimited domain of learning tasks.
2. Criterion referenced testing requires that instructional objectives be clearly defined in behavioral (performance terms).
3. Criterion referenced testing requires that standards of performance be clearly specified.
4. Criterion referenced testing requires that student performance be adequately sampled within each area of performance.
5. Criterion referenced testing requires that test items be selected on the basis of how well they reflect the behavior specified in the instructional objectives.
6. Criterion referenced testing requires a scoring and reporting system that adequately describes student performance on clearly defined learning tasks.

The need for this staff development program has been discussed with Mr. Edgar Quimby, Vice-President for Instruction, Delaware County Community College who fully supports this study. It is imperative that faculty members be prepared in the shortest time possible to assume responsibility for total curriculum revision, since a self-evaluation of the nursing program must be completed by 1979, prior to revisit by representatives of The National League for Nursing accreditation team for continued accreditation of the nursing program.

PROCEDURE FOR COLLECTING DATA

An instructional sequence was designed (Appendix A) for nursing instructors to learn selected curriculum development facts. Additionally, the study seeks to identify learning gain following completion of the instructional sequence and demonstrate that individuals can learn through this independent study method.

Nursing instructors participated in the study on a voluntary basis. Non nurses who held at least an earned baccalaureate degree served as the control group. Orientation sessions were held with the participants to explain the purposes of the project. Guidelines were suggested regarding the use of self-instructional materials. Each participant completed a criterion referenced pre-test (Appendix B), based on identified essentials (Appendix C) prior to being assigned an auto-tutorial unit. The pre-test was constructed to assess the level of knowledge of participants regarding nursing education concepts. Results of the test provided a basis for measuring gain following completion of the instructional sequence. The test was scored at the mastery level (i.e., minimum achievement of essentials. Participants who achieved below the mastery level (80 % correct) were requested to complete the instructional sequence.

Section I of the pre-test consists of a series of five true/false statements designed to measure knowledge of basic nursing education concepts. Test items included educational terms, the nature and process of nursing and criteria for self-evaluation of nursing programs developed by The National League for Nursing.

Section II consists of a series of completion statements. A

series of words are supplied from which participants must choose the word most appropriate for the statement. By this means, the participant's understanding of nursing education concepts, the theoretical framework and definitions applicable to nursing education were elicited.

Section III consists of a matching test. Knowledge of nurse educators and the theoretical construct attributed to each is basic for completion of this section of the pre-test.

The instructional packet includes the objectives of the sequence, the directions for study and a related bibliography. To identify the objectives for the sequence, a variety of resources were investigated to determine the kinds of behavior to be included. Books, articles from nursing journals and guidelines of The National League for Nursing and the State Board of Nurse Examiners were searched. The post-test is identical to the pre-test. The test was developed to measure performance based upon the objectives of the instructional sequence. Guidelines developed by Krueger (1971) were used to design the sequence:

1. The objectives for a sequence should be stated in specific behavioral terms and the content for that sequence should be selected for its relevance to the objectives.
2. The content presentation should be organized in a step-by-step manner.
3. The learner should be actively involved at all times during study of the sequence.
4. Immediate confirmation regarding the correctness or incorrectness of his response should be available to the student.
5. The sequence should be designed in a way so that all of the information and the materials and supplies needed to achieve the objectives are an integral part of the sequence.

The objectives for the sequence indicate that, upon completion of the unit, the learner will:

1. Define pertinent educational terms used in describing a

nursing curriculum.

2. Assess the value, utilization and potentiality of a conceptual framework as essential to the development of the nursing program.
3. Compare the current major theories of nursing practice.
4. Discuss the purpose of a conceptual framework according to The Criteria for Self Evaluation of Educational Programs in Nursing Leading to An Associate Degree published by the National League for Nursing.

Concise instructions facilitated the completion of the instructional sequence by participants. The purposes of the self-instructional unit are to promote the recall of pertinent information and/or to increase the participant's knowledge of nursing education concepts. Participants were advised that the programmed unit consists of a text and a supplemental booklet. The instructions state that information in the sequence is broken down into small segments or steps, called "frames." Each frame reviews previously presented material or presents some new information. The participant was instructed to make a response for each frame (i.e., write in a word or series of words, select one or more correct answers from alternatives), and to indicate in some manner his understanding of the materials. Further, the participant was advised that the correct response is provided in the shaded (correct response) area to the right of the statement. Additionally, he was instructed not to look at the answer until he had indicated what he believed to be the correct response. After responding, he should compare the choice he made with the correct

response shown in the shaded area of the frame. The participant was also cautioned to read both questions and directions carefully in order to avoid unnecessary errors. However, if he made an error, he was advised to proceed to the next frame only after he understood the correct answer. The participant was given a sample frame and three practice frames to acquaint him with the frames in the instructional sequence as follows:

The frames in the sequence look like the sample labeled "SAMPLE" immediately following:

SAMPLE

Information in this programmmed instruction sequence is presented in small steps called frames. The student is required to make a response and then check his response with the correct response shown in the shaded area of the frame.

CHECK the item that completes the following statement.

A frame is made up of:

_____ information only.
_____ correct responses only.
_____ both information and correct responses.

both information and correct responses

The following frames have been included for practice. Before proceeding, take the MASK provided for the sequence and place the MASK over the shaded area.

1.

This is a self-instructional sequence designed to teach nursing education concepts.

A sequence consists of a series of teaching units called frames. Each frame represents some information and calls for some response on your part.

For example, complete the sentence below.

The subject matter for this instructional sequence is

_____.

Nursing Education Concepts

NOW SLIDE THE MASK DOWN TO SEE THE CORRECT RESPONSE

2.

Complete the following sentences by checking the correct phrase.

In programmed instruction, a mask is used in order to:

_____ see the correct response before the question has been answered.

_____ cover the correct response until the question has been answered.

cover the correct response until the question has been answered

NOW SLIDE THE MASK DOWN TO SEE THE CORRECT RESPONSE

3.

When you have completed the last frame on a page, TURN TO THE NEXT PAGE AND PLACE THE MASK OVER THE SHADED AREA (CORRECT RESPONSE COLUMN)

It is necessary to place the mask over the correct response column when you turn to the next page in order to make sure that you:

_____ will see the correct response on that page.

_____ will not see the correct response on that page.

will not see the correct response on that page

Predetermined specific learning outcomes for each of the three sections of the pre-test and the post-test were:

CRITERION: NURSING EDUCATION CONCEPTS - PRE AND POST ASSESSMENT

I. 1. List the commonalities in nine different theories of nursing practice described by nurse educators.

2. State the purpose of a conceptual framework in developing and/or revising the curriculum of an Associate Degree Nursing Program.

3. Specify whether all integrated nursing curricula are conceptually based.

4. List the purpose (s) of a theory of nursing practice.

5. Discuss the criteria for evaluating the program of learning as stated in The Criteria for the Evaluation of Educational Programs Leading to An Associate Degree.

II. 1. Classify three elements that are considered in structuring and/or revising a nursing curriculum.

2. Determine the value, utilization and potentiality of the conceptual framework in the nursing program.

3. Define the term concept.

4. Define the term theory.

III. Differentiate between the theories of nursing practice described by the following nurse educators:

1. Abdellah

2. Rogers

3. Orem

4. Roy

5. Pepleau

6. Johnson

7. Travelbee

8. Howland

9. Orlando

A criterion referenced pre-test was developed to measure whether or not specific learning outcomes identified were achieved. The learner was judged to have met the objectives (criterion) if he achieved at the 80% level (e.g. mastery of minimum essentials). The identical test was used as a post-test. The results of the post-test will be compared to the pre-test scores to measure the degree of learning gain with respect to competencies concerning educational concepts.

The self-instructional sequence consists of nineteen frames. Frames one and two consist of a preview frame and a frame in which the participant is instructed to write a brief definition for each word listed. Prior to completing frame 2, the participant is instructed to read Supplement A in the Supplemental Booklet. By reading Supplement A the student will either recall previously learned definitions of the educational term or acquire a new definition of the educational term. The participant will complete frame two by writing a definition for each education term listed. The learner is instructed to compare the choice he made with the correct response shown in the shaded area of the frame. Thus, by frequent response by the participant and immediate feedback informing him whether his response is appropriate or not, positive learning is reinforced and incorrect responses are immediately corrected.

Questions three through ten are concerned with the Tylerian theory of curriculum development including sources of objectives, philosophy and objectives and sources of objectives. The participant is instructed to read Supplement B prior to completing frames three through ten. The learner can refer back to the material

included in the supplement prior to completing any single frame. Frame three requires no response. Frame four requires that the participant respond in writing to a question. Frames five through ten present information and in each frame requires a response from the learner based upon the information presented. The participant can learn individually and adjust his rate of progress to his needs and capabilities. This allows the "fast" learner to learn more in a given time period and the "slow" learner can learn when given time enough to do so.

Questions eleven through nineteen relate to theories of nursing practice described by nationally known nursing educators. Prior to completing these frames, the participants were instructed to read Supplement C. Supplement C compares the theories of nursing practice, these include values identified by the nurse educator, the goal to be achieved for or by the patient, the recipient of nursing care and the planned nursing intervention. Frames eleven through nineteen briefly summarize the conceptualization of nursing practice postulated by each of nine nurse educators. The learner is required to respond in each frame to material presented in the frame.

Throughout the unit, information is presented and frequent responses are required from the learner. Immediate feedback is provided the learner with the correct response written in the shaded area of each frame of the instructional sequence. The use of such a reinforcement technique permits participants to study necessary information at a time convenient to them and for the amount of time required to achieve the objectives of the instructional sequence.

Evaluation of the instructional sequence (Appendix D) provided participants an opportunity to assess the relative merit of the self-instructional unit. Data collected on the evaluation form included both attitudes and opinions as well as factual information regarding the respondent's perceptions of the self-instructional sequence. Open-ended questions were used. To eliminate the possibility of inaccurate information, each participating group was instructed to write additional responses in the space provided if they elected to do so. Section seven provided the respondent an opportunity to add items which he believed should be included in the instructional sequence on nursing education concepts. This avoided the possibility of bias due to the omission of other possible choices. It made possible, also, the securing of additional general information as well as the attitudes and opinions of the participants.

Six full-time nursing instructors, six part-time nursing instructors and six baccalaureate graduates (non nurse) completed the pre-test, the instructional sequence, and post test. All members of the groups except one full-time nursing instructor completed the evaluation of the unit. The baccalaureeate graduates served as a control group. According to Best (1958), using a control group improves the possibility of attributing gain in scores to the content of the instruction.

The pre-test, instructional sequence, post-test and evaluation of the instructional sequence were completed during the weeks of December 14 and 21, 1975. Table I indicates the number of participants among nursing instructors and baccalaureate graduates.

TABLE I

NUMBER OF USABLE PRE-TESTS, POST-TESTS AND EVALUATIONS COMPLETED BY FULL TIME NURSING INSTRUCTORS, PART TIME NURSING INSTRUCTORS AND BACCALAUREATE GRADUATES

CATEGORY	PRE TEST	POST TEST	EVALUATIONS
FULL TIME INSTRUCTORS	6	6	5
PART TIME INSTRUCTORS	6	6	6
BACCALAUREATE GRADUATES	6	6	6

PROCEDURE FOR TREATING DATA

Tabulations were begun following completion of the pre-test by full-time nursing instructors, part-time nursing instructors and the baccalaureate graduate (control group) participants. (Appendix E) Responses to the evaluation sheet were also summarized for statements one through six. (Appendix F) Additional comments of participants were tabulated by category and number of responses. (Appendix G)

Data from the pre-test was tabulated according to the three sections: Section I - True/False statements regarding nursing education concepts, Section II - completion of sentences related to nursing education concepts and Section III - matching the theory of nursing practice to the nurse educator who postulated the theory.

All statements in Section I are true statements and relate to nursing education concepts basic to curriculum development and revision. The percentage of correct and incorrect responses of full-time nursing instructors, part-time nursing instructors and control group participants are summarized in Table II. Both nurse instructor and control group participants responded incorrectly most frequently to statements three and five which relate to the conceptual framework of a nursing curriculum. One of the full-time nursing instructors (17%) responded incorrectly to the statement that a theory of nursing would be represented by a set of statements, based on sound and replicable research, which would permit one to predict how particular changes in the clinical environment would affect nursing care. Seventeen to thirty-three percent of the part-time nursing instructors responded incorrectly to each one of the state-

ments. Seventeen percent of the control group responded incorrectly to the statement regarding nurse educators and thirty-three percent responded incorrectly to the statement regarding a conceptual framework. Such a response is indicative of a lack of knowledge of nursing education concepts basic to curriculum development.

TABLE II

PERCENTAGE OF CORRECT AND INCORRECT RESPONSES OF FULL-TIME NURSING INSTRUCTORS, PART-TIME NURSING INSTRUCTORS AND BACCALAUREATE GRADUATES TO STATEMENTS RELATIVE TO NURSING EDUCATION CONCEPTS

STATEMENT	RESPONDENT	PERCENTAGE	
		CORRECT	INCORRECT
There are commonalities in nurse educator's perception of the nature of nursing practice.	Full-time	100 %	0 %
	Part-time	83 %	17 %
	Control group	83 %	17 %
The theoretical framework serves as a guide to the selection and placement of courses and learning experiences in the nursing curriculum and operationalizes accountability in relation to the curriculum.	Full-time	100 %	0 %
	Part-time	83 %	17 %
	Control group	100 %	0 %
All conceptual framework curricula are integrated, but not all integrated curricula are conceptually based.	Full-time	100 %	0 %
	Part-time	83 %	17 %
	Control group	66 %	33 %
A theory of nursing would be represented by a set of statements, which would permit one to predict how particular changes in the clinical environment would affect nursing care.	Full-time	83 %	17 %
	Part-time	66 %	33 %
	Control group	100 %	0 %
The National League for Nursing Criteria for the Evaluation of Educational Programs in Nursing Leading to An Associate Degree requires that the conceptual framework of the program of learning be clearly stated.	Full-time	100 %	0 %
	Part-time	83 %	17 %
	Control group	100 %	0 %

In Section II, participants of the study were required to select from among a list of words the most appropriate response, placing the word in the blamk space to complete the statement. The percentage of correct and incomplete responses of full-time nursing instructors, part-time nursing instructors and baccalaureate graduates (control group) to the completion statements pertinent to nursing education concepts is summarized in Table III.

Forty-four percent of the respondents answered incorrectly the statement that in structuring a curriculum, according to Ralph Tyler, three elements to be considered are the learner, nursing experts and society. The participants unanimously completed correctly the statement that the conceptual framework defines the components to be integrated and that consistency in these components be maintained in each level of the curriculum. One hundred percent of the full-time nursing instructors, fifty percent of the part-time nursing instructors and fifty percent of the control group participants correctly defined the term concept. Fifty percent of the full-time nursing instructors, fifty percent of the part-time nursing instructors and fifty percent of the baccalaureate graduate participants were able to correctly define the term theory.

TABLE III

PERCENTAGE OF CORRECT AND INCORRECT RESPONSES OF FULL-TIME NURSING INSTRUCTORS, PART-TIME NURSING INSTRUCTORS AND BACCALAUREATE GRADUATES TO COMPLETION STATEMENTS RELATIVE TO NURSING EDUCATION

STATEMENT	RESPONDENT	PERCENTAGE	
		CORRECT	INCORRECT
In structuring a curriculum according to Ralph Tyler three elements to be considered are the learner, nursing experts, and society.	Full-time	55 %	45 %
	Part-time	77 %	23 %
	Control group	90 %	10 %
The conceptual framework defines the components to be integrated and that consistency in these components be maintained in each level of the nursing curriculum.	Full-time	100 %	0 %
	Part-time	100 %	0 %
	Control group	100 %	0 %
A concept can be described as word symbols, abstract ideas that give meaning to our sense perceptions and permit generalization.	Full-time	100 %	0 %
	Part-time	50 %	50 %
	Control group	50 %	50 %
A theory is a set of interrelated constructs, definitions and propositions that presents a systematic view of phenomena by specifying relations among variables with the purpose of explaining and predicting the phenomena.	Full-time	50 %	50 %
	Part-time	50 %	50 %
	Control group	50 %	50 %

In Section III of the pre-test, participants in the study were required to match the name of a nurse educator to the theory of nursing practice she postulated. Table IV illustrates the percentage of full-time nursing instructors, part-time nursing instructors and baccalaureate graduate participants correctly matching the nurse educator to the theory of nursing practice attributed to her. One hundred percent of the full-time nursing instructors correctly matched the name of Abdellah to the correct theory of nursing practice. Sixty-six percent of them matched the name of Pepleau to the interpersonal relationship system of nursing practice. Sixty-four percent of the part-time nursing instructors correctly matched the name of Abdellah to twenty-one nursing problems. Additionally, fifty percent of the part-time nursing instructors correctly matched the name of the nurse educator, Orem to the self-help system of nursing practice and Pepleau to the interpersonal relations system. Obviously, nursing instructors had incomplete knowledge of nurse educators as well as theories of nursing practice. Baccalaureate graduate participants failed to match seven of the nurse educators to the appropriate theory of nursing practice. Only sixteen percent of the control group participants correctly matched Abdellah to twenty-one nursing problems and Orlando to the symbolic interaction system. Both of these nurse educators are less well known than the other seven and it is likely that the respondent may have guessed on both of these responses.

TABLE IV

PERCENTAGE OF CORRECT AND INCORRECT RESPONSES OF FULL-TIME NURSING INSTRUCTORS, PART-TIME NURSING INSTRUCTORS AND BACCALAUREATE GRADUATES MATCHING THE NAME OF THE NURSE EDUCATOR TO THE CORRECT THEORY OF NURSING PRACTICE

NURSE EDUCATOR	THEORY OF NURSING PRACTICE	RESPONDENT	PERCENTAGE	
			CORRECT	INCORRECT
Abdellah	21 Nursing Problems	Full-time	100 %	0 %
		Part-time	66 %	34 %
		Control group	16 %	84 %
Rogers	Life Processes System	Full-time	0 %	100 %
		Part-time	16 %	84 %
		Control group	0 %	100 %
Orem	Self Help System	Full-time	0 %	100 %
		Part-time	50 %	50 %
		Control group	0 %	100 %
Roy	Adaptation Theory	Full-time	0 %	100 %
		Part-time	16 %	84 %
		Control group	0 %	100 %
Pepleau	Interpersonal Relationship Theory	Full-time	66 %	34 %
		Part-time	50 %	50 %
		Control group	0 %	100 %
Johnson	Behavioral System	Full-time	0 %	100 %
		Part-time	0 %	100 %
		Control group	0 %	100 %
Travelbee	Developmental Theory System	Full-time	0 %	100 %
		Part-time	0 %	100 %
		Control group	0 %	100 %
Howland	Triad System	Full-time	0 %	100 %
		Part-time	16 %	84 %
		Control group	0 %	100 %
Orlando	Symbolic Interaction Theory	Full-time	0 %	100 %
		Part-time	16 %	84 %
		Control group	16 %	84 %

On a criterion referenced mastery test, the student should be able to obtain perfect or near perfect scores if the instruction (self instruction using instructional sequence) has been effective. Bloom (1973) claims that:

> Ninety-five percent of the students .... can learn a subject to a high level of mastery (for example, and A grade) if given sufficient time and appropriate types of help.

The learning outcomes for the self instructional unit (Appendix H) were developed on nursing education concepts. A table of specifications (Appendix I) was also developed to assure that the test would measure a representative sample of the instructional objectives and the content included in the instruction. The pre-instruction and post instruction test items (Appendix B and J) are a representative sample of expected behavioral outcomes for the unit.

The level of mastery for the pre instructional test was set arbitrarily at eighty percent correct responses. An item by item analysis of the pre instructional test and the response of each participant of the study is illustrated in Table V. Correct responses are identified by a "1", incorrect responses by an "0" and no response by an "-". The pattern of responses indicate that the majority of participants had some knowledge of the utility of a conceptual framework in the nursing curriculum. Participants had difficulty defining educational terms, the Tylerian theory of curriculum development and additionally, failed to match the name of the correct nurse educator to the theory of nursing attributed to her.

TABLE V

ITEM RESPONSE CHART FOR A CRITERION REFERENCED MASTERY PRETEST ON NURSING EDUCATION CONCEPTS
(N = 18)

CRITERION MEASURE CONTENT AREA	EDUCATIONAL CONCEPTS											NURSE EDUCATORS AND THEORIES OF NURSING PRACTICE									TOTAL CORRECT RESPONSES	PERCENT MASTERY LEVEL ATTAINMENT
INSTRUCTIONAL OBJECTIVE	3	2	2	1	4	1	1	1	2	1	1	3	3	3	3	3	3	3	3	3		
ITEM NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
PARTICIPANT 1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	1	0	0	0	0	12	60 %
2	1	1	1	1	1	1	0	0	1	1	0	1	0	0	-	1	-	-	-	-	10	50 %
3	1	1	1	1	1	1	0	0	1	1	0	1	0	0	0	0	-	-	-	-	9	45 %
4	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	9	45 %
5	1	1	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	7	35 %
6	1	1	1	1	1	1	0	1	1	-	1	0	0	0	0	0	0	0	0	0	8	40 %
7	1	-	1	1	1	1	0	1	1	0	1	-	-	-	-	-	-	-	-	-	8	40 %
8	1	1	1	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	8	40 %
9	1	1	1	0	1	0	0	1	1	1	0	1	0	1	1	0	0	0	0	0	10	50 %
10	0	1	0	1	1	0	0	0	1	0	1	1	1	1	0	1	0	0	1	0	10	50 %
11	1	1	0	1	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	1	9	45 %
12	1	0	1	1	1	0	0	0	1	1	1	1	-	-	-	-	-	-	-	-	8	40 %
13	1	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	7	35 %
14	1	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	7	35 %
15	1	1	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	6	30 %
16	0	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	7	35 %
17	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	25 %
18	1	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	25 %
TOTAL INCORRECT	2	3	5	3	1	11	17	13	1	8	8	6	18	15	17	15	18	18	18	18		

The number of incorrect responses by a majority of the participants indicates incomplete understanding of nursing education concepts by the three groups of participants. None of the eighteen respondents achieved at the eighty percent mastery level. Figure 1 compares the percentage of correct responses to the test statements by full-time nursing instructors, part-time nursing instructors and baccalaureate graduate participants (control group). Scores ranges from twenty-five to sixty percent correct responses with a mean of forty percent correct responses.

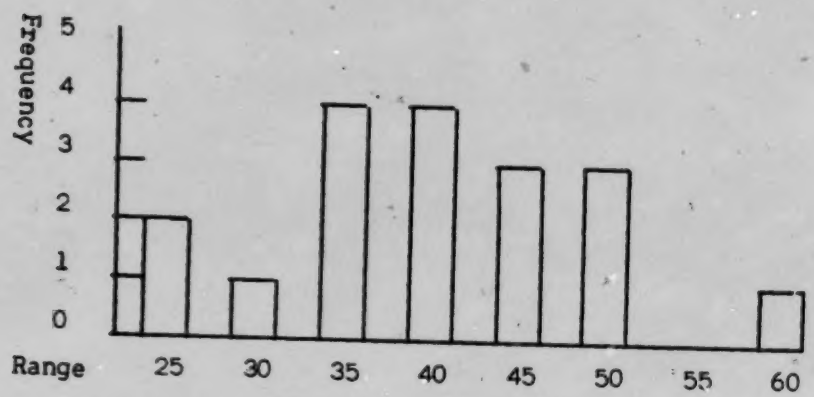

Figure 1. Range of Correct Responses of Participants Completing Pre-test on Nuring Education Concepts (N = 18)

The percent mastery level pre-test achievement of full-time nursing instructors, part-time nursing instructors and baccalaureate graduate participants are compared in Figure 2. The percent mastery level of achievement for the full-time nursing instructors ranged from thirty-five percent to sixty percent with a difference of twenty-five points from high to low. The percent mastery level of achievement for part-time nursing instructors was from forty to fifty percent with a range from lowest to highest of ten percent-

age points. The point spread earned by the baccalaureate graduate participants was ten percentage points, ranging from twenty-five to thirty-five percent. As expected, the lowest percentage correct scores were earned by the control group participants.

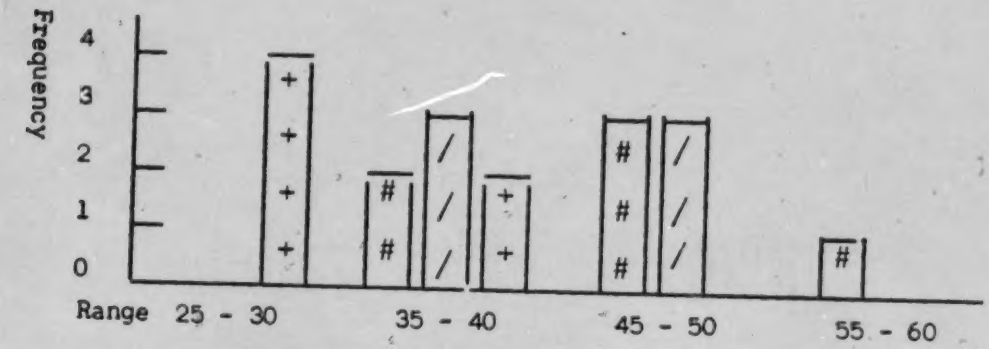

Figure 2. Range of Percent Correct and Frequency of Responses of Full-time Nursing Instructors, Part-time Nursing Instructors and Baccalaureate Graduate Participants Completing Pre-test on Nursing Educational Concepts (N = 18)

KEY: Full-time nursing instructor #
Part-time nursing instructor /
Baccalaureate graduate +

The eighteen participants voluntarily completed the instructional sequence, the post-test and the evaluation of the programmed unit. An item by item response chart was completed on the responses to the post instruction test (Appendix K). The post-test was identical to the pre-test. Most participants answered items incorrectly before instruction and correctly following instruction, indicating that instruction (completing the instructional sequence) was effective. A participant answering the test item correctly in the pre-test, then responding incorrectly after instruction reflects either poor test construction, ineffective instruction or guessing by the respondent. Some participants responded correctly on the pre-test, but a larger proportion of the participants responded correctly after

instruction (completion of the instructional sequence). This is as expected and according to Gronlund (1973):

> ... a normal response pattern for effective test items is that some students can be expected to respond correctly on the pretest but a larger portion of the students will respond correctly after instruction.

There was a marked increase in the number of correct responses after instruction (completion of the instructional sequence). Figure 3 compares the number of participants and percent point gain in the post instructional test. The percentage point gain ranged from fifteen to sixty-five.

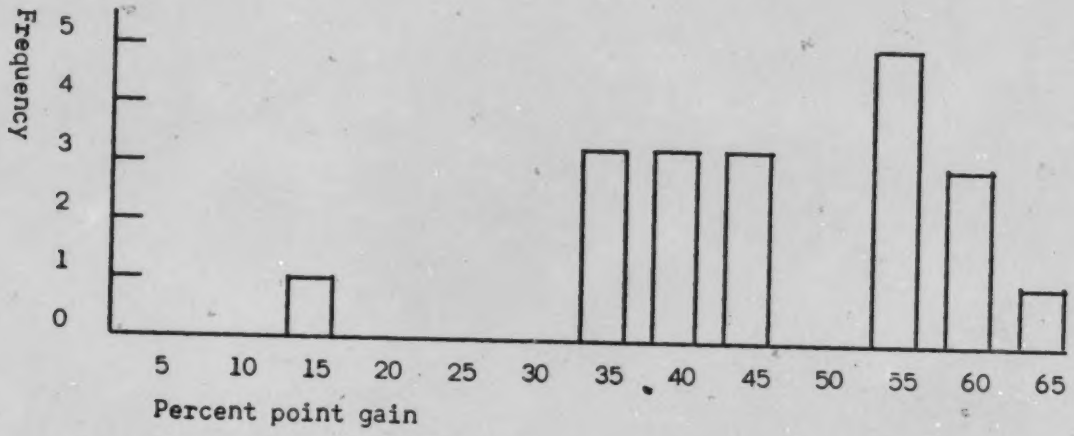

Figure 3. Range of Percent Point Gain and Frequency of Correct Responses of Participant Completing the Post Instructional Test on Nursing Education Concepts (N = 18)

Using criterion referenced tests, it is possible to measure learning gain in terms of the differences of individual participant's scores in the pre and post instructional test. Participants were assigned numbers. Numbers one through six were assigned to the full-time nursing instructors. The numbers seven through twelve were assigned to part-time nursing instructors and numbers thirteen through eighteen were assigned to the baccalaureate graduate participants.

Correct responses of the participants on the pre and post instruction tests were recorded (Appendix L). These were ranked with the participant achieving the most gain ranked first and the participant with the least gain ranked last. The pre and post instruction scores and the overall post instruction test gain are illustrated in Table VI.

TABLE VI

PRE AND POST INSTRUCTION TEST SCORES AND PERCENT OF LEARNING GAIN
(N = 18)

RESPONDENT NUMBER	PRE INSTRUCTION PERCENT	POST INSTRUCTION PERCENT	PERCENT GAIN
1	35 %	100 %	65 %
2	40 %	100 %	65 %
3	40 %	100 %	60 %
4	40 %	100 %	60 %
5	50 %	100 %	50 %
6	50 %	100 %	50 %
7	45 %	95 %	50 %
8	40 %	90 %	50 %
9	35 %	85 %	50 %
10	50 %	95 %	45 %
11	45 %	90 %	45 %
12	35 %	75 %	40 %
13	30 %	75 %	40 %
14	60 %	95 %	35 %
15	25 %	60 %	35 %
16	35 %	60 %	25 %
17	25 %	50 %	25 %
18	45 %	60 %	15 %

Marked improvement occured in the post instruction test of each of the participating groups. The most noticeable gain was in Section II question one which related to the Tylerian concept of curriculum development. Another area of exceptional gain was Section III related to nurse educators and the theory of nursing practice atributed to that educator. The mean percentage point gain was forty-five percentage points. Even though there was considerable percentage gain, one of the full-time nursing instructors failed to achieve at the mastery level on the post test. Of the eighteen participants, nine earned a percentage point gain above the mean and achieved at the mastery level in the post-test. (Appendix K)

The adequacy of criterion test items cannot be measured using the usual discrimination indices for normative referenced test items. To analyze the changes that occur with items following instruction, (completion of instructional sequence) the approach described by Popham (1971) was used:

> Four possibilities exist. For any learner and item could be answered incorrectly (0) on the pretest, then correctly (1) on the posttest, and thus be designated for that individual as an 01 item. Similarly, 00, 11, or 10 responses could occur. The possible results of each of the 100 individuals completing the pretest and posttest can be represented as in Figure 1. Cell A can be thought of as a positive change cell, while Cell D represents the negative change cell.

		Posttest	
		correct	incorrect
Pretest	incorrect	01 (A)	00 (B)
	correct	11 (C)	10 (D)

Figure

A Fourfold Table Representing Possible Pretest-Posttest Performance on Test Gain

The number of individuals responding in each of the four ways (00, 01, 11, 10) for each test item were summarized. Following Popham (1971), when overall improvement during instruction is present, the 01 category (Cell A) would seem to indicate this improvement, while 10 (Cell D) would not seem to reflect improvement.

Improvement is evident in Section I items one, two and three and Section III items eleven through fifteen. Positive changes for these eleven items suggests a knowledge gain on the part of the participants.

Aberrant items (10 category response) occured a total of ten times. These items refer to definitions of conceptual framework, concept and theory. Review of the original data indicates that three full-time nursing instructors responded correctly (1) in the pre-test, but incorrectly (0) on the post-test on the statement concerning the theoretical framework. The majority of respondents choose the correct response both on the pre-test and the post-test, while only two demonstrated learning gain. Four participants scored incorrectly (0) on item four which relates to knowledge of theory. Again, three full-time nursing instructors responded correctly (1) in the pre-test, but incorrectly (0) on the post-test. However, six participants demonstrated learning gain and six responded correctly both on the pre-test and the post-test. Conceivably, this occured due to confusion as to terminology by the full-time nursing instructor participants.

Item analysis used with normative referenced testing cannot be used to determine test validity because variability is not

relevant in criterion referenced measurement. In criterion referenced mastery testing, the extent to which the test items have adequately sampled the stated objectives and the subject matter content (instructional unit) is considered content validity. Thus, content validity in criterion referenced testing is largely a matter of the test developer's judgment. Validity and reliability of criterion referenced mastery tests are assured only by careful test construction.

Criterion referenced interpretations of test results are primarily concerned with content validity. However, results can be used to predict the individual's future chances of success in the mastery of material. Gronlund (1971) proposed the use of an expectancy table to identify the extent to which criterion referenced test results accurately predict some future performance. Table VII illustrates the use of pre-test scores on nursing education concepts predicting mastery level attainment (80 % correct) following instruction.

TABLE VII

EXPECTANCY TABLE SHOWING THE RELATION BETWEEN PRETEST SCORES AND THE NUMBER OF PARTICIPANTS ATTAINING MASTERY AT THE COMPLETION OF THE INSTRUCTIONAL SEQUENCE ON NURSING EDUCATION CONCEPTS (N = 18)

PRETEST SCORES	PERCENTAGE	NUMBER OF PARTICIPANTS	
		NONMASTERY	MASTERY
12	60 %	0	1
11	55 %	0	0
10	50 %	0	3
9	45 %	1	2
8	40 %	0	4
7	35 %	2	2
6	30 %	1	0
5	25 %	3	0

Those participants scoring at the fortieth percent correct on the pre-test were the more likely to attain mastery (80% correct) at the completion of the instructional unit. Only two participants achieving below the fortieth percent correct were able to attain mastery following instruction. These results are based on only eighteen participants. However, the results suggest that future participants scoring seven or less statements correct on the pre-test are less likely to attain mastery following instruction.

Five of the full-time nursing instructors, the six part-time nursing instructors and the six baccalaureate graduate participants completed the student evaluation of the instructional sequence on nursing education concepts (Appendix D). The perceptions of the respondents are summarized in Table VIII. Fourteen of the respondents perceived that the material dealt with in the instructional sequence was relevant to the present or future needs of a nursing instructor. Three participants did not respond to this statement. Ten of the individuals were in agreement that the instructional sequence was clear and to the point, while seven choose the response that it was somewhat clear. One part time instructor indicated that the unit was a waste of time and energy. Sixteen perceived that the instructional sequence does focus on the intent of the objectives. Participants did not indicate a preferance for any one method of learning. Respondents rated the instructional sequence as good, very good or excellent.

TABLE VIII

COMPARISON OF RESPONSES OF FULL TIME NURSING INSTRUCTORS, PART TIME NURSING INSTRUCTORS AND BACCALAUREATE GRADUATE PARTICIPANTS EVALUATING THE INSTRUCTIONAL SEQUENCE ON NURSING EDUCATION CONCEPTS

STATEMENT	CATEGORY OF RESPONDENT	RESPONSE			
		YES	NO	NO RESPONSE	
Do you consider the material dealt with in the instructional sequence as relevant to your present or future needs as a nursing faculty member?	F T N I	5			
	P T N I	6			
	B G P	3		3	
		CLEAR	SOMEWHAT CLEAR	UNCLEAR	
The instructional sequence is: a. clear and to the point b. somewhat clear c. unclear	F T N I	2	3		
	P T N I	5	1		
	B G P	3	3		
		WASTE	FOCUSED		
The instructional sequence is: a. a waste of time and energy b. focused on the intent of the objectives of the instructional sequence	F T N I		5		
	P T N I	1	5		
	B G P	3	3		
		VAGUE	CONCISE		
The principles and concepts described in the instructional sequence are a. vague and confusing b. concise and to the point	F T N I		5		
	P T N I		6		
	B G P	1	5		
		LECTURE	DISCUSSION	PI	
I prefer to learn by: a. lecture b. discussion c. use of self-paced programmed instruction	F T N I	2	2	2	
	P T N I	4	5	5	
	B G P	2	2	3	
		POOR	FAIR	GOOD	VERY EXC
Overall, I would rate the instructional sequence a. poor b. fair c. good d. very good e. excellent	F T N I		1	2	2
	P T N I		2	2	2
	B G P		2	3	1

KEY: F T N I Full time nursing instructor
P T N I Part time nursing instructor
B G P Baccalaureate graduate participant

The comments of the evaluators were categorized as to advantages or positive responses and negative responses. The advantages are summarized in Table IX. Both full and part time nursing instructors commented that the instructional sequence was worthwhile and provided nursing education information. Of the three negative comments, three concerned the amount of material covered and the structure of the sequence.

TABLE IX

COMPARISON OF POSITIVE COMMENTS AS PERCEIVED BY FULL TIME NURSING INSTRUCTORS, PART TIME NURSING INSTRUCTORS AND BACCALAUREATE GRADUATE PARTICIPANTS REGARDING THE INSTRUCTIONAL SEQUENCE ON NURSING EDUCATION CONCEPTS

FULL TIME NURSING	PART TIME NURSING	BACCALAUREATE GRADUATE
Summarization of the various theories (e.g. comparison) especially interesting and comprehensible.	Worthwhile - easy access to current nursing education information.	
Facilitates application in practice of learner.		
Wealth of information was made available that would have taken hours on my part.		
Very helpful to me in acquiring a basic understanding.	Instructional sequence will be of inestimable value to faculty of any type of nursing program.	Some of the ideas I can use.
Data in Supplement B pertinent to curriculum development.		
I cannot learn quickly. I require a great deal of time in my reading and often have to reread for full understanding.	Like being able to work on the sequence at home.	
		A programmed text would be useful for learning about educational objectives.

CONCLUSIONS AND RECOMMENDATIONS

Educational literature documents the need to develop an effective and economical means to teach nursing education facts. An increase in medical, scientific, psychosocial and nursing information, the limited time available to nurse educators for learning new concepts and the need to involve faculty members in self-learning activities were contributing factors in the development of the instructional sequence.

Guidelines developed by Krueger (1971) were used to design the instructional sequence. The first guideline states that the objectives for a sequence should be stated in behavioral terms and the content for that sequence should be selected for its relevance to the objectives. The objectives identified for the unit were: (1) Define pertinent educational terms used in describing a nursing curriculum; (2) Assess the value, utilization and potentiality of a conceptual framework as essential to the development of the nursing program; (3) Compare the current major theories of nursing practice and discuss the purposes of The Criteria for Self-evaluation of Educational Programs in Nursing Leading to An Associate Degree. Thus, the first guideline was met.

A second guideline stipulated by Krueger (1971) was that the content presentation should be organized in a step-by-step manner. The items were arranged in a logical sequence. Each sequence defined new terms, required recall of previously learned ideas or required the participant to respond to statements related to the application of principles. Thus, Krueger's second guideline was met.

The third guideline suggested by Krueger (1971) is that the

learner should be actively involved at all times during study of the sequence. Participants were required to respond to each frame of the sequence. The sequence was designed using the psychological concept of the nature of attending or responding, thus meeting the requirements of the third guideline. The sequencing of items facilitated the choosing of the correct response, thus providing immediate positive reinforcement which is a stipulation of the fourth guideline. Using this technique in the programmed unit met the fourth guideline.

The fifth and last guideline states that the sequence should be designed in such a manner that information, materials and supplies needed to achieve the objectives are an integral part of the sequence. The instructional sequence was designed with a supplement (Appendix A) that contains detailed information regarding the materials in each frame. Additionally, information is presented in certain frames which require a response from the learner based on the information presented. Hence, the fifth guideline is met.

The findings of the study closely parallel the study by Krueger (1971) which demonstrated that participants acquired most of the scientific facts and principles presented. Results of this study demonstrate that in a short time period (averaging less than two hours), individuals attained a learning gain of fifteen to sixty-five percentage points, with a mean of forty percentage points. In addition, all except one of the nursing instructors attained mastery level (80% correct) following the completion of the instructional sequence on educational concepts. This illustrates that information pertinent to the nursing curriculum can be acquired an a short time period. Nursing instructors commented about the amount of time needed to complete the sequence. Some required more

time to complete the sequence than others. This, too, corresponds to Krueger's findings that an instructional sequence enabled each participant to determine the amount of self-directed activity necessary to learn the programmed material.

The control group's learning gain ranged from forty-five to sixty percentage points (Appendix K). Four of the control group participants attained mastery level (80% correct) as compared to five of the full-time nursing instructors and all of the part-time nursing instructors. The fact that the learning gain attained by the control group was high and that four of them attained mastery demonstrates that the completion of the instructional sequence facilitated the learning of nursing education concepts.

The advantages of the instructional sequence as perceived by the control group as well as the nursing instructors closely paralleled the advantages cited in the educational literature. Notable among the advantages cited are: (1) a competent instructor (i.e., Programmed unit is always available; (2) fast learners can learn more in a given time period and the slow learner can learn if given sufficient time to do so. Comments by participants (Appendix G) corroborated this with statements such as:

> Worthwhile - easy access to current nursing education information,
>
> I cannot learn quickly, I require a great deal of time in my reading and often have to reread for full understanding.
>
> The instructional sequence will be of inestimable value to faculty of any type of nursing program.
>
> I like being able to work on the sequence at home.
>
> A wealth of information was made available that would have taken hours of research on my part and a programmed text would be useful for learning about educational concepts.

The advantages of this teaching technique and affirmation of its effectiveness by participants suggests the utilization of additional programmed units to familiarize nursing instructors with essential educational concepts pertinent to curriculum development and/ or revision.

The study was prompted by the fact that nursing instructors responsible for curriculum change and revision had limited understanding of nursing education concepts. Perceptions of nursing instructors and administrative personnel differ as to whether the nursing instructors are knowledgeable regarding nursing education concepts and are academically prepared to assume responsibility for curriculum development and revision. Findings of the study support the following recommendations:

RECOMMENDATION I

UTILIZE CRITERION REFERENCED MASTERY TESTS TO IDENTIFY THE DEGREE OF KNOWLEDGE OF NEWLY APPOINTED NURSING INSTRUCTORS OF NURSING EDUCATION CONCEPTS

Criterion referenced measurement can be used to differentiate between the learner who has mastered the information and the one who has not. They are useful in determining whether the learner has attained mastery level for the specified criterion. If the items truly reflect the stated objective to be attained (criterion), the percent mastery of the test will predict the extent to which the learner has acquired the essential knowledge.

RECOMMENDATION II

THE INSTRUCTIONAL SEQUENCE ON NURSING EDUCATION SHOULD BE USED FOR ORIENTATION OF NEWLY APPOINTED NURSING INSTRUCTORS

It is evident from summarization of the data in the study that nursing instructors did experience learning gain following completion of the instructional sequence. The use of programmed instruction facilitates the learning of knowledge pertinent to curriculum development.

RECOMMENDATION III

THE INSTRUCTIONAL SEQUENCE ON NURSING EDUCATION CONCEPTS SHOULD BE USED AS A BASIS FOR THE DEVELOPMENT OF ADDITIONAL MODULES RELATED TO EDUCATION CONCEPTS APPLICABLE TO NURSING

Faculty have voiced concern that they are responsible for curriculum development and revision, but are not academically prepared. The majority of nursing instructors did not have curriculum development as a part of the educational program at the graduate level. Responses of instructors indicate that they need to understand more thoroughly theories of nursing practice and curriculum development concepts.

RECOMMENDATION IV

REPLICATE THE STUDY TO INCLUDE NURSING INSTRUCTORS OF OTHER NURSING PROGRAMS

The sample should be increased and the same technique utilized to assess the learning gain of learners following the completion of the instructional sequence. The limitation of this study was the size of the sample which prevents generalization of the findings beyond that sample.

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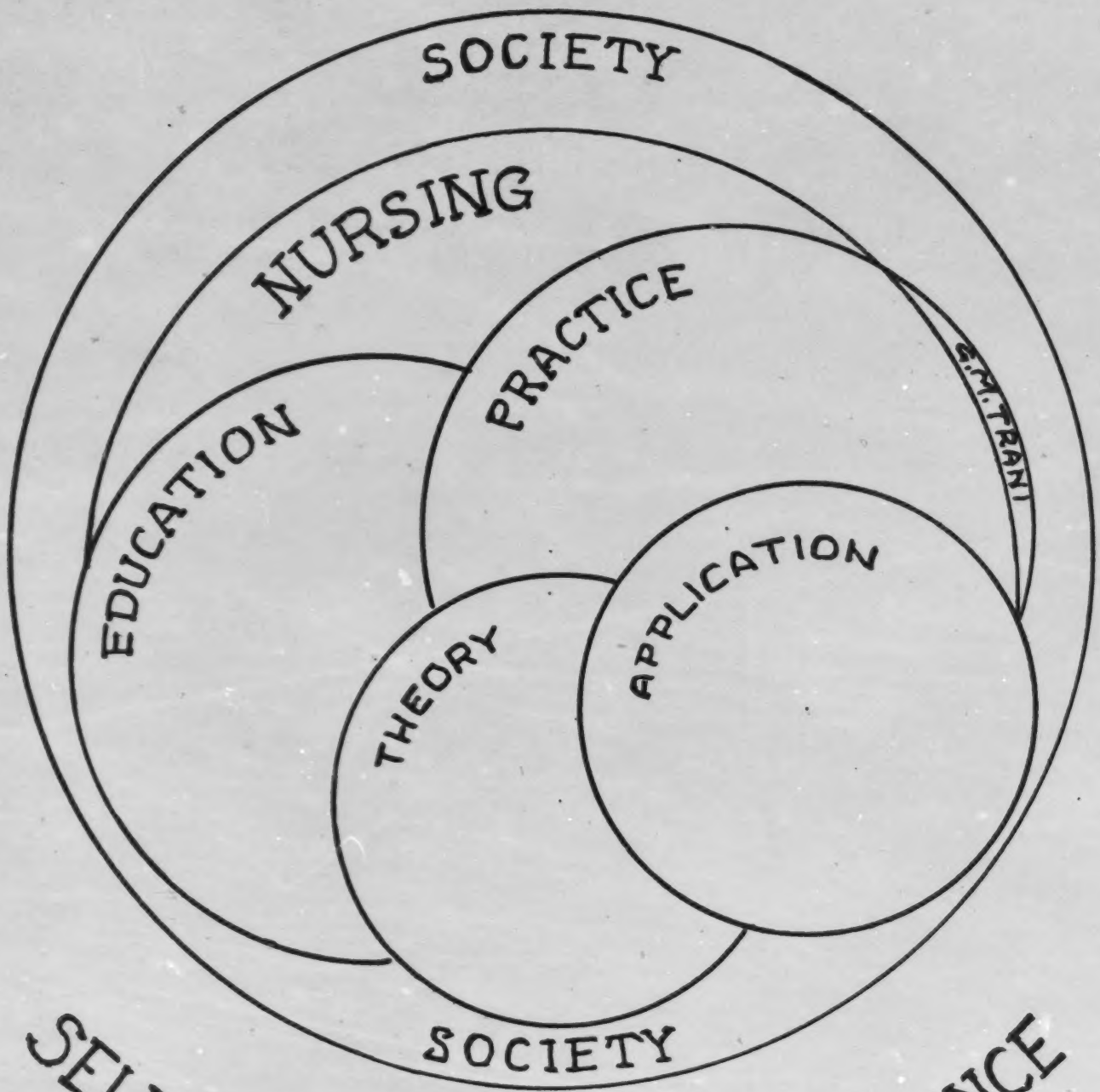


SELF INSTRUCTIONAL SEQUENCE

Self-Instructional Unit I Approximate Working Time 1 - 2 hours

Instructor: Gilberta M. Trani

Institution: Delaware County Community College

Course Title: Nursing Curriculum Development

Topic: Nursing Education Concepts

Target Group: Faculty - Nursing Program

Rationale:

The nursing program will be revisited by The National League for Nursing for continued accreditation in the fall of 1979. In the intervening three years, you as faculty members will be participating in the evaluation of the nursing program. Since the self-evaluation guide used by the nursing program is The National League for Nursing Criteria for Self-Evaluation of Educational Programs Leading to An Associate Degree, it is crucial that you are able to analyze the nursing program based upon the criteria. Additionally, to complete the self-evaluation of the nursing program, you will need to identify the conceptual framework basic to the program of learning as well as distinguish the theory of nursing practive inherent in the framework. As you work through this unit on Nursing Education Concepts, you will recall or learn facts and principles which will enable you to make sound judgments in assessing the current nursing curriculum.

Preassessment:

1. You completed the pre-test.

2. Check your answers with the booklet insert on page . If you completed Section I completely, see the instructor. If you missed any question in Section I, work through this unit.

Objectives:

After completing the unit, the learner will:

1. Define pertinent education terms used in describing a nursing curriculum.

2. Assess the value, utilization and potentiality of a conceptual framework as essential to the development of the nursing program.

3. Determine the integrating threads of a curriculum.

4. Compare the current major theories of nursing practice.

5. Discuss the purpose of The Criteria for Self-Evaluation of Educational Programs Leading to An Associate Degree.

INSTRUCTIONS TO STUDENTS

The purpose of this self-instructional program is to help you recall information that at one time was familiar to you, or add to your knowledge of nursing education concepts. The use of self-instructional programs to present factual information may be a method of teaching unfamiliar to you.

This self-instructional sequence from which you are about to learn, is designed to teach you about nursing education concepts. Each unit consists of a text and a supplementary booklet. In the sequence, information is broken down into small segments, or steps, called "frames." Each frame reviews previously presented material or presents some new information. For each frame, you are to make a response (write in a word or series of words, label a diagram, select one or more correct answers from alternatives) or indicate in some manner your understanding of the materials. The correct response is provided in the shaded area (correct response area) to the right. The learner should not look at the answer until he has indicated what he believes to be the correct response. After responding, compare the choice you made with the correct response shown in the shaded area of the frame.

In studying this sequence, it is essential that you read the questions and the directions carefully. Complete each frame as directed check a box, fill in a blank, or refer to the supplemental booklet. Failure to follow directions will cause you to make unnecessary mistakes. There should be no need to refer back to previous frames to answer questions. However, if you make an error, do not go to the next frame

until you understand why you made the error. Remember, always cover the correct response until you are ready to check your response with the correct answer.

The frames in the sequence look like the sample labeled "SAMPLE" immediately following:

SAMPLE

Information in this programmed instruction sequence is presented in small steps called frames. The student is required to make a response and then check his response with the correct response shown in the shaded area of the frame.

CHECK the item that completes the following statement.

A frame is made up of:

_____ information only.
_____ correct responses only.
_____ both information and correct responses.

both information and correct responses

The following three frames have been included for practice. Before proceeding, take the mask provided for the sequence and place the mask over the shaded area.

1.

This is a self-instructional sequence designed to teach nursing education concepts.

A sequence consists of a series of teaching units called frames. Each frame represents some information and calls for some response on your part.

For example, complete the sentence below.

The subject matter of this instructional sequence is

_____ .

Nursing Education Concepts

NOW SLIDE THE MASK DOWN TO SEE THE CORRECT RESPONSE

2.

Complete the following sentences by checking the correct phrase.

In programmed instruction, a mask is used in order to:

_____ see the correct response before the question has been answered.

_____ cover the correct response until the question has been answered

cover the correct response until the question has been answered

NOW SLIDE THE MASK DOWN TO SEE THE CORRECT RESPONSE

3.

When you have completed the last frame on a page, TURN TO THE NEXT PAGE AND PLACE THE MASK OVER THE SHADED AREA (CORRECT RESPONSE COLUMN).

It is necessary to place the mask over the correct response column when you turn to the next page in order to make sure that you:

_____ will see the correct responses on that page.

_____ will not see the correct responses on that page.

will not see the correct response on that page

SECTION ONE: NURSING EDUCATION TERMS

1.

PREVIEW FRAME

In this section on nursing education terms, we will review terminology specific to nursing education. An understanding of nursing education terms is basic to curriculum development and/or revision. To eliminate semantic differences, specific words in the language of curriculum have specific meaning.

Defining terms prevents confusion of terms, increases effective communication among nurse educators and provides for clarity in describing nursing education concepts.

Study supplement A, then in the space below, write a brief definition for each word listed.

OPEN SUPPLEMENTAL BOOKLET TO SUPPLEMENT A

Close supplemental booklet

Go on to Frame 2

2. Define the following terms:

Nursing

Nursing is concerned with assisting man to obtain optimum health throughout his life process.

Nursing process

Nursing process is a designated series of actions assessing, planning, implementing and evaluating patient situations to fulfill the purpose of nursing.

concept

A concept essentially is the mental image the individual has of reality.

construct

A construct consists of several concepts which interrelate.

conceptual framework

A conceptual framework is an abstraction - a representation of an imaginary construct which provides a way of perceiving - serves as a way of thinking.

a model

a theory

a system

A model is a conceptual representation of reality.

A theory is a conceptual framework invented for some purpose.

A system is a set of elements or component parts dynamically interrelated which function within some boundaries.

3.

Tyler identified four fundamental questions that must be answered in developing any curriculum or plan of instruction.

NO RESPONSE REQUIRED

OPEN SUPPLEMENTAL BOOKLET TO SUPPLEMENT B

Close supplemental booklet

Go on to Frame 4.

4.

State the implied task for faculty members in the space provided for each of the following questions:

What educational purpose should the school seek to attain?

Formulation of educational goal.

What educational experiences can be provided that are likely to attain these purposes?

Selection of learning experiences by which students may attain goals.

How can these educational experiences be effectively organized?

Effective and efficient organization of the learning experiences.

How can we determine whether these purposes are being attained?

Evaluation of the extent to which the goals have been attained.

5.

The health delivery system of this country is being closely scrutinized locally, regionally and nationally. Accessibility to quality health care is now viewed as a birthright rather than a privilege. There is a growing community awareness of a need for the profession to practice that which is relevant to the client. Nursing has been assigned by society the task of assessing patients ' needs, designing and implementing care plans to meet those needs and additionally, responsibility for instructing patients and others in the maintenance of health and participation on an interdisciplinary team in providing health care. To accomplish this implies the need for education. Education seeks to change the behavior patterns of individuals providing care. Lysaught, et al (1972) identified that which from society's viewpoint, it wants from today s nurse:

> "...have a keen sensitivity to the patient's wants, a comprehensive knowledge of procedures and technology and a clear grasp of the behavioral and sciences that provide a basis for judgment."

To fulfill these expectations, sources of educational objectives as stated by Ralph Tyler include _____, _____ and _____.

Sources of educational objectives include the learner, society and subject specialists.

6.

The nursing curriculum is commonly defined as all of the learning which is planned and guided by the school whether or not it is carried on in the classroom, the clinical area, pre and post conferences, or in other segments of the students' lives.

Complete the following statement:

The nursing curriculum is

The nursing curriculum is all learning which is planned and guided by the school.

7.

Philosophy is a belief, a construct, a speculation about the nature and value of things. The philosophy of the nursing program contains the faculty's belief about the individual, the learner, the teacher, nursing, the nurse practitioner and the consumer of health care.

Complete the following statement:

The philosophy is _____
_____.

The philosophy is a statement about the nature of things.

_____

8.

There are two major classifications of behavioral objectives: specific and general.

Specific behavioral objectives provide all the "givens." The objective contains a description of the learner; the behavior the learner will exhibit to demonstrate that he has attained competence; conditions under which the learner will demonstrate competence and a statement of the standard of performance expected.

The specific behavioral objective controls the activity of learner and teacher.

A specific behavioral objective _____
_____
_____.

A specific behavioral objective describes the learner, the expected behavior, conditions under which behavior takes place and the standard of performance expected.

9.

General behavioral objectives describe the learner and the kind of behavior the learner will exhibit to demonstrate he has attained competence. This type objective clarifies expected behavioral outcomes.

An example of a general behavioral objective is the objective of the nursing program. The objectives of the nursing program are broad statements of the goals that the nursing program is designed to achieve. Objectives are used to communicate the intent of the program to others interested in the program.

The objectives of the nursing program are _____ _____.

The objectives of the nursing program are broad statements of the goals of the nursing program.

10.

The two classifications of behavioral objectives are _____ and _____.

specific and general

OPEN SUPPLEMENT BOOKLET TO SUPPLEMENT C

READ SUPPLEMENT C

Close supplement booklet

Go on to Frame 11

11.

Pepleau was one of the first nurse educators to use an interpersonal theoretical framework. She defined nursing as a therapeutic interpersonal process which functions cooperatively with other human processes.

The theory of nursing practice conceptualized by Pepleau is a _____.

The theory of nursing practice conceptualized by Pepleau is a interpersonal relations system.

12.

A well known interaction model of nursing practice whose conceptual framework is dependent upon symbolic interaction theory is that of Orlando. The central focus of Orlando's text, The Dynamic Nurse-Patient Relationship was interpersonal relationships. According to Orlando, learning to understand what is happening between herself and the patient is the central core of the nurse's practice and comprises the basic framework for the help she gives the patient.

The theory of nursing practice described by Orlando is _____.

The theory of nursing practice described by Orlando is symbolic interaction theory.

13.

Faye Abdellah, et al. in the text Patient Centered Approaches to Nursing, identified twenty-one nursing problems. The four groups of basic problems identified were: (1) problems relating to basic human needs; (2) problems related to normal and disturbed physiological body processes; (3) problems related to emotional and interpersonal difficulties and (4) problems of a sociological nature. The twenty-one nursing problems approach indicates a patient oriented concept of nursing based on human needs.

The theory of nursing based on human needs and having a patient oriented concept is attributed to_____.

The theory of nursing based on human needs and having a patient oriented concept is attributed to Abdellah.

The four best known system models in nursing are the adaptation model of Roy (1970), the triad system of Howland and McDowell (1964), the life process system of Rogers (1970) and Johnson's behavioral system model (1963).

14.

According to Roy, nursing is concerned with man as a total being. Man is viewed as an adaptive system (adapting to physiologic needs, self-concept, role function and interdependent relations during health and illness) receiving stimuli from the environments which are inside and outside his zone of adaptation.

The nurse educator associated with the adaptation theory of nursing practice is _____ .

The nurse educator associated with the adaptation theory of nursing practice is Roy.

15.

The health-care system conceptualized by Howland has been labeled the "nurse-patient-physician triad," a "patient-care model," and an "information decision making model." Information and decision making are considered essential to the delivery of patient care. The patient represents the source (signal) of information about the patient state to the monitor (nurse, patient, doctor, mechanical monitor, therapist) responsible for care. The comparator (nurse, doctor) compares the actual state of the patient that the monitor has observed with the desired state that the controller has specified and note any differences between them. The regulatory function consists of selecting and carrying out the appropriate action to reduce the difference between the actual and desired state or condition of the patient. The patient as a process responds to inputs from either the environment or the regulator.

The Howland model is known as _____ _____ .

The Howland model is known as the nurse patient physician triad.

16.

The Martha Rogers model concerns itself with man in his entirety, his wholeness and his interaction with his environment. Nurses are responsible for valuing the individuality of man and for providing service to people and striving for the total well being of man and society. She bases the theory of nursing practice on the fact that man's life processes involve the qualities of wholeness, openness, unidirectionality, pattern and organization, sentience and thought. Rogers identified four principles of homeodynamics to explain the nature of life processes and to predict the paths along which they will evolve.

The theoretical framework for nursing practice conceptualized by Rogers is called the_____ system.

The theoretical framework for nursing practice conceptualized by Rogers is called the life process system.

17.

Dorothy Johnson's theory for nursing practice is based on a systems theory whereby man is viewed as a collection of subsystems which are interdependent and interrelate to form a whole person or behavioral system. Man is seen as a dynamic whole responding to an ever changing environment. Nursing is concerned with the person who is ill rather than with the illness Nursing is obligated to seek the highest possible level of behavioral functioning for the patient. The nurse's focus is to assist the patient to cope when the stress, or threat of illness exists.

A theory of nursing practice based on a behavioral systems model is attributed to _____.

A theory of nursing practice based on a behavioral system model is attributed to Johnson.

18.

Orem postulated the self-care agency theory of nursing practice. The theory is based on self evident characteristics of human beings and human socities. (i.e., human beings require continuous, deliberate inputs to self and to the environment in order to remain alive and function in accord with natural human endowments). Self-care is directed toward the achievement and/or maintenance of normality and includes: (1) development and maintenance of a realistic self-concept; (2) protecting the body and maintaining integrated human function and (3) identifying and attending to deviations from normal health and wellbeing. The goal of nursing is to achieve a health result from individuals sick or well when they need help. The nurse designs, provides and manages systems of therapeutic self-care for individuals within their environments of daily living. Self-care, if positively therapeutic helps to sustain life processes, maintain integrated function, promote normal growth and development and prevents or controls sisease and disability and their effects.

The self-care agency system of nursing practice was developed by _____ .

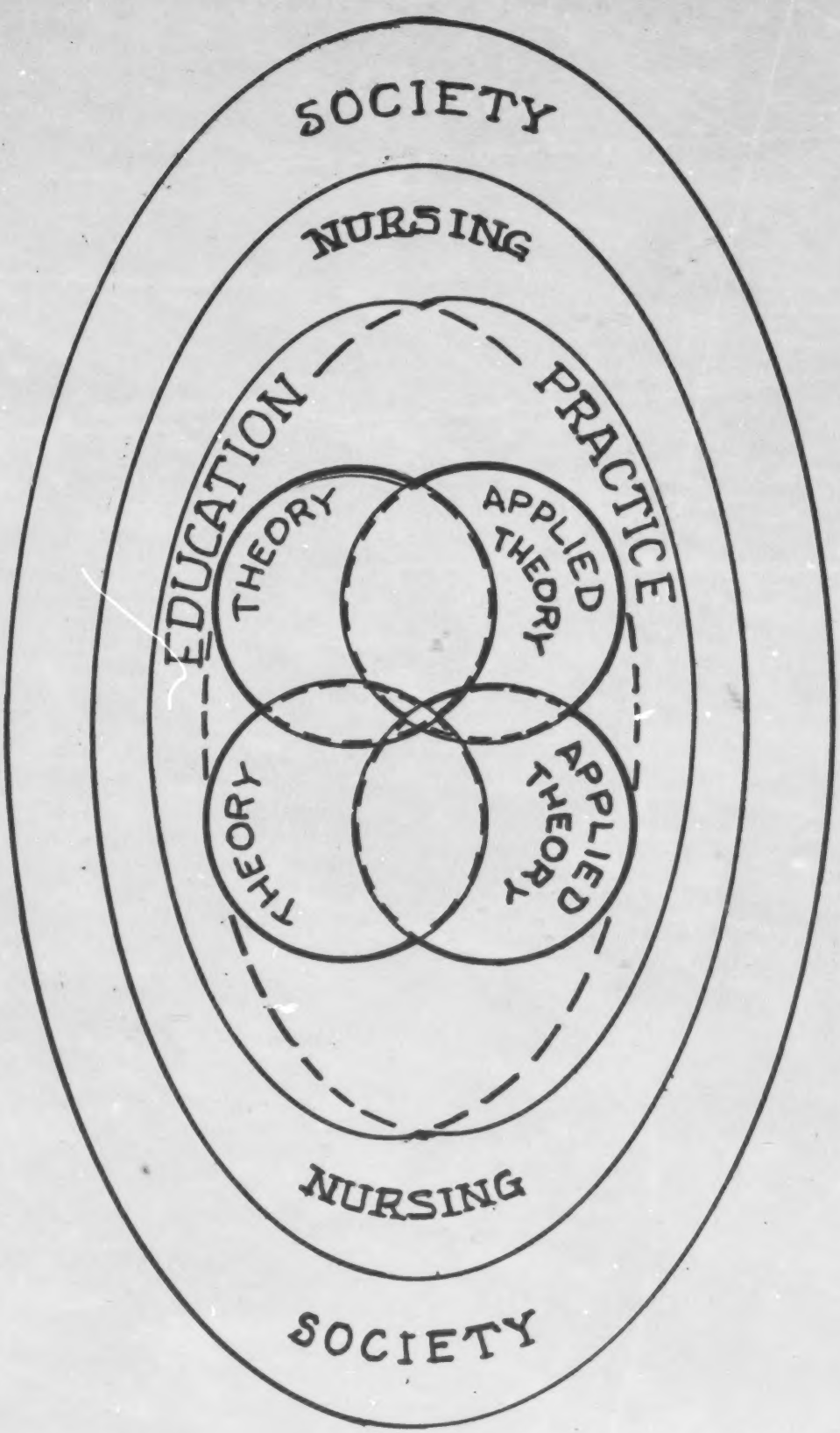
The self-care agency theory of nursing practice was developed by Orem.

19.

Growth and change is emphasized in Travelbee's conceptualization of a theory of nursing practice. In the text, Interpersonal Aspects of Nursing, published in 1966, Travelbee lists some of the elements of a developmental nursing model. For this nurse educator, the goal of nursing includes helping the individual in maintaining the highest possible level of optimum health through measures such as good physical care, rehabilitation, health teaching and self-actualization. The nurse helps the patient accept his human condition. This model for nursing includes elements of an interpersonal process as well as developmental.

Travelbee is credited with conceptualizing the _____ system of of nursing practice.

Travelbee is credited with conceptualizing the developmental theory system of nursing practice.



SUPPLEMENTAL BOOKLET

SUPPLEMENT A

DEFINITIONS

The majority of nurse educators will concur that nursing is concerned with assisting man to obtain optimum health throughout his life process. Wiedenback (1964) identified the purpose of nursing as to be meeting the requirements of persons experiencing some need for help. Henderson (1966) states that the unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that he would perform unaided if he had the necessary strength, will, or knowledge.

Yura (1975) defines nursing as an encounter with a client and his family in which the nurse observes, supports, communicates, ministers and teaches; she contributes to the maintenance of optimum health, and provides care during illness until the client is able to assume responsibility for the fulfillment of his own basic human needs - when necessary she provides compassionate assistance with dying.

Rogers (1970) defines nursing as the maintenance and promotion of health, prevention of disease, nursing diagnosis, intervention and rehabilitation.

According to Brown (1948) the professional nurse will be one who recognizes and understands the fundamental (health) needs of a person, sick or well, and who know these needs can best be met. She will possess a body of scientific knowledge which is based upon and keeps pace with

general scientific advancement, and she will be able to apply this knowledge in meeting the nursing needs of a person and a community. She must possess that kind of discriminative judgment which will enable her to recognize those activities which fall within the area of professional or non-professional groups.

Lambertson (1958) states that nursing may be described as a dynamic, therapeutic and educative process meeting the health needs of society. Its distinctive function refers to the physiological and psychosocial responses to health which may or do result in a state of dependence upon others for meeting needs which are normally within the potential of the individual or family. In a therapeutic, educative relationship, nursing assists the individual and/or family to achieve their potential for self-direction for health.

Johnson (1972) describes nursing care as that which is provided to individuals or groups under stress of a health-illness nature and has as its primary purpose the relief of tension and discomfort to the end of restoring or maintaining internal and interpersonal equilibrium. According to Johnson, the nurse intervenes in situations of stress or tension to reduce the effect of stress-producing stimuli on the patient, in the management of the patient's physical or psychological environment and to provide support and protection for the patient's own adaptive and defensive mechanisms.

Peplau (1952) defines nursing as a significant therapeutic interpersonal process which functions cooperatively with other human processes that make health possible for individuals in communities.

The American Nurses' Association succinctly defines nursing as a helping profession and as such provides services which contribute to the health and well-being of people.

The nursing process is identified by Yura as an orderly systematic manner of determining the client's problems, making plans to solve them, initiating the plan or assigning others to implement it, and evaluating the extent to which the plan was effective in resolving the problem identified.

Figure 1 illustrates a model of the nursing process as proposed by Bloch (1974) The components of the model are:

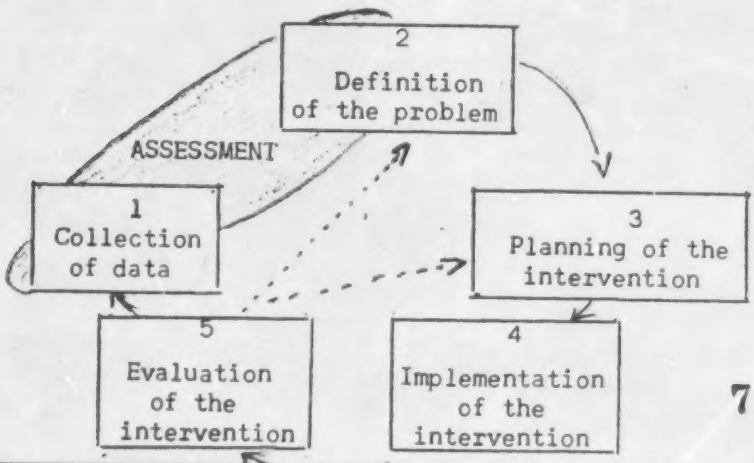
"1. Collection of data
the gathering of information (objective and subjective) on the physical, social, and emotional aspects of the health status of individuals, families, or communities.

2. Definition of the problem
The making of the decision(s) regarding the deficit(s) or potential deficit(s) in the health status of individuals, families, or communities that are believed to be in need of correction.

3. Planning of the intervention
the making of the decision(s) regarding the action(s) believed to be appropriate to effect a solution of the defined problem(s).

4. Implementation of the intervention
carrying out the planned action(s)

5. Evaluation of the intervention
determining the degree of effectiveness of the action(s) taken in solving the defined problem(s)



CONCEPT

A concept is the meaning an individual gives a general notion, thought or symbol - an abstract idea generalized from particular instances. Essentially, it is the mental image the individual has of reality.

CONCEPTUAL FRAMEWORK

A conceptual framework is a notion or a symbol that gives structure to the curriculum and reflects the philosopny and objectives stated by the faculty. It is an abstraction - a representation of the universe or a portion of the universe. It is an imaginary construct which provides a way of perceiving man and his environment and serves as an aid to thinking.

CONSTRUCT

A construct consists of several concepts which interrelate.

MODEL

A model is a conceptual representation of reality. It can show the features of a discipline and give direction to clusters of laws that are selected to form a theoretical system. Nursing models provide a basis for selecting knowledge to be transmitted in nursing education. In building models, nursing considers societal values, goals of nursing action, the recipient of nursing care and nursing intervention.

THEORY

A theory is a hypothesis involving an assumption or an opinion. Theory should provide conceptualization intended to guide the shaping of reality to a profession's professional purpose - the function of theories is to describe, explain, predict and control phenomena in the world around us. A theory is a conceptual framework invented to some purpose according to Dickoff and James (1969) These authors describe four levels of theory:

"1. Factor isolating theory (classification) naming- combines aspects of concepts.

2. Factor relating theory (situation depicting) relationship between one or more factors.

3. Situation relating theory (predictive) A causes B, then can predict what will happen.

4. Situation producing theory (prescriptive) - specific characteristics of a situation to be produced. How to change or control a situation."

CONCEPTUAL SYSTEM

Goodlad (1972) defines a conceptual system as a carefully engineered framework designed to identify and reveal relationships among complex, related, interacting phenomena; to reveal the whole where wholeness otherwise might not be thought to exist. The functions of a conceptual system are viewed by Goodlad (1972) to be:

"1. Identification of problems and questions presumably having relevance to planning any instructional program.

2. Clarification of the types of inquiry likely to be productive in dealing with these problems and questions.

3. Revelation of possible connections among these problems and questions.

4. Identification of promising data sourses for dealing with these problems and questions.

5. Initiation of processes designed to reveal the relevance of these sources and of data extracted from them to the problems and questions classified by the system."

A conceptual system can provide a bridge between theory and the discipline's practice. The curriculum builder uses the system to gain perspective, formulate theories and conduct research. The practitioner uses the theoretical models developed by the system in fulfilling the purpose of nursing. Through feedback, there is self-correction and change in educational planning and application of knowledge in the clinical setting. Figure 2 illustrates this self-correction element.

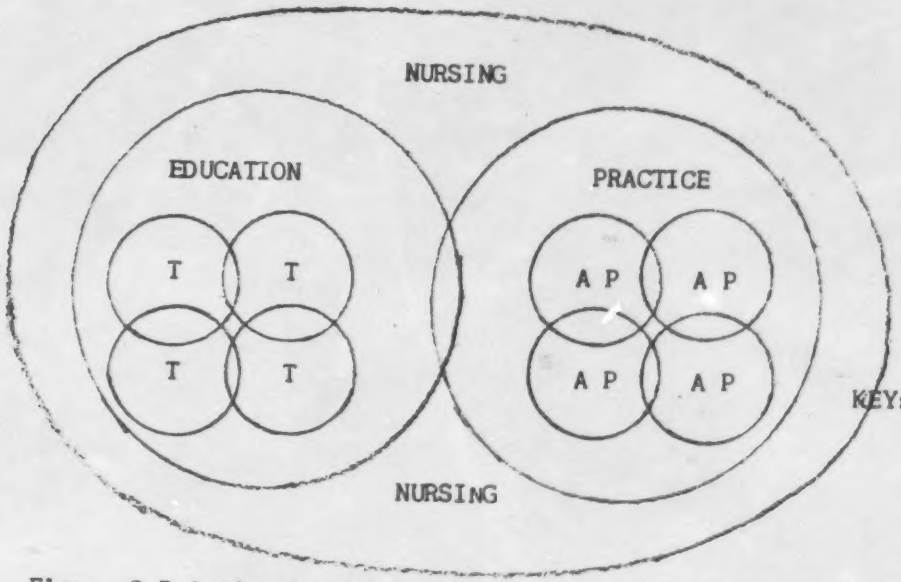


Figure 2 Relationship of Theory to Education and Practice

SYSTEM

A system is a set of elements or component parts dynamically interrelated which function within some boundaries.

SUPPLEMENT B

Tyler (1950) identified four fundamental questions which must be answered by faculty in developing any curriculum and plan of instruction. Figure 1 lists the four questions and corresponding tasks of a nursing faculty in curriculum development and instructional planning.

QUESTION	TASKS OF NURSING FACULTY
1. What educational purposes should the school seek to obtain?	1. Formulation of educational goal.
2. What educational experiences can be provided that are likely to attain these purposes?	2. Selection of learning experiences by which students may attain the goal.
3. How can these educational experiences be effectively organized?	3. Effective and efficient organization of the learning experiences.
4. How can we determine whether these purposes are being obtained?	4. Evaluation of the extent to which the goals have been attained?

Figure 1. Questions and tasks of faculty members in curriculum development

According to Tyler (1950), it is necessary to have a conception of the goals to be achieved. This is necessary since the objectives become the criteria by which materials are selected, content is outlined, instructional procedures are developed and examinations are prepared.

Sources of educational objectives include the learner, society, and subject specialists. Each source has value to commend it. Tyler (1950) defines education as a process of changing the behavior patterns of people. To identify needed change in behavior patterns of the student which the educational institution should seek to produce, curriculum developers must study the learner. The studies

the learner suggest educational objectives only when the information about the learner is compared with some desirable standard, so that the difference between the desirable standard and the status of the learner can be identified. The difference between the status of the student and the standard to be obtained as identified by the faculty is generally referred to as a need, which can be constructed into an educational goal.

Educational objectives are also derived from a study of the expectations of society. Nurses should study society's needs for nursing care, including problems of illness and health, data on morbidity and mortality and the effect of disease on the wellbeing of society. To identify a basis upon which educational objectives may be constructed, it is also necessary to analyze the expectations of society for care.

A third data source from which educational objectives can be derived is the recommendation of subject matter specialists. Brown (1961) lists two questions which should be asked of subject matter specialists for the greatest assistance in curriculum planning:

"1. What broad function can this particular subject serve?

2. What contribution can this particular subject serve?"

It is important to realize in revising curriculum and when studying contemporary life outside of the school that increased knowledge precludes the teaching of all that is known by scholars in a given subject matter area.

Education is considered a process by Tyler (1950) which

involves the formulation of objectives and the selection and organization of learning activities which give rise to experiences which are evaluated and the cycle is repeated. The cycle of the educational process as described by Tyler (1950) is illustrated in Figure 2.

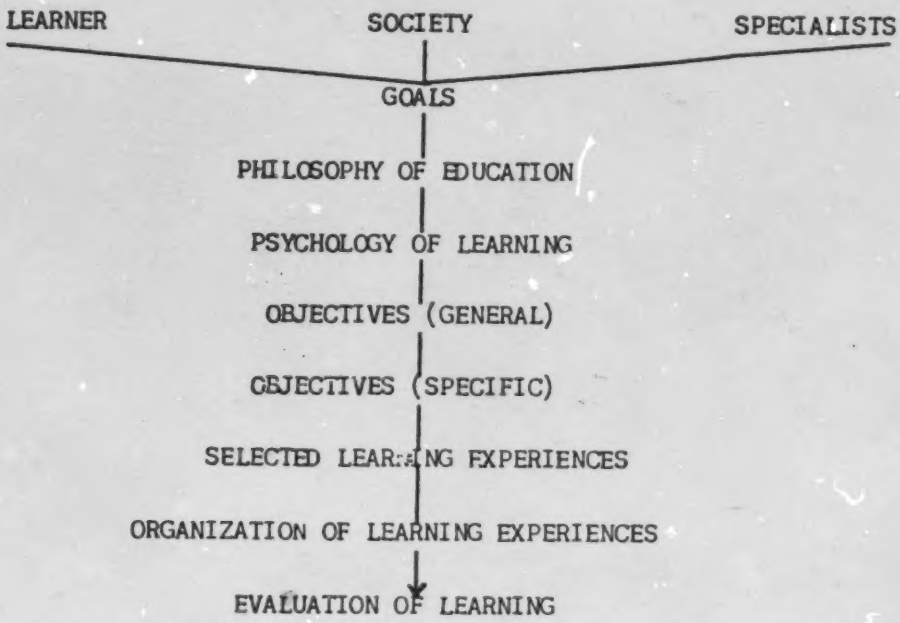


Figure 2 Tyler's Theory of the Educational Process Cycle

Three elements are contained in a general behavioral objective. Tyler (1950) identified these as:

"1. Description of the learner.

2. Statement of the kind of behavior the learner will exhibit to demonstrate he has attained competence.

3. Statement of the kind of content to which behavior relates."

Each objective should indicate in some manner botn the sort of behavior that is desired and the sort of situation in which it is to

occur. (i.e., know (behavior) the physiology of the heart (situation).

Objectives should be stated in terms of the student behavior that is desired rather than in terms of teacher behavior. The student is to think (cognitive) feel (affective) and to act (motor). There are few general objectives, but many specific objectives. Specific objectives should be formulated to a level of specificity such that for each objective it is possible to readily infer some learning activities appropriate for helping students achieve the objective. Additionally, it is possible to devise a means of evaluating the achievement.

SUPPLEMENT C

COMPARISON OF THEORIES OF NURSING PRACTICE

EDUCATOR	VALUES	GOAL	RECIPIENTS OF CARE	PLANNED INTERVENTION
Rogers Life Processes	Individuality of man Service to people and society Wellbeing of man Developmental science, basic for nursing practice	Attainment of best state of health for man who is coninually evolving	A dynamic interacting with the environment Man whose life processes involve the qualities of wholeness, openness, unidirectionality, pattern & organization, sentience and thought	Data gathering - gather data that shows the total pattern of events at any given point in space and time. Energy source or dynamics involved between giver of care and recipient.
Roy Adaptation	Nurse is concerned with man as a total being. Nursing focuses on patient as a person adapting to those stimuli present as a result of his position on the health illness continuum	Man's adaptation to: physiological needs self concept role function interdependence relations during health & illness	Man as an adaptive system receiving stimuli from the environment which are inside and outside his zone of acceptance	Nurse through problem solving approach promotes patient's adaptation; The patient is the one adapting: is the doer.
Johnson Behavioral Model	Man is a dynamic whole responding to an ever changing environment. Nursing is concerned with the person who is ill, not his disease. Accepts behavior of patient. Seeks highest possible level of behavioral functioning based on value judgments of society.	Assist patient to cope when the stress or the threat of illness exists. Nurse serves as a regulator as to the appropriate use of his energy to adapt to the illness & the maintenance of his developmental level of function.	Progression along the health illness continuum.	Uses nursing process: Assessment Diagnosis Intervention Evaluation

Comparison of Theories of Nursing Practice - Continued

EDUCATOR	VALUES	GOAL	RECIPIENT OF CARE	PLANNED INTERVENTION
Travelbee Developmental: Focus on growth of patient	Humanism of man Capacity of caring Therapeutic use of self	Assists individual in maintaining the highest possible level of optimal health through measures such as good physical care, rehabilitation, health teaching and self-actualization.	Man responds to illness and suffering by progressing through stages that patient goes through when he is moving away from finding meaning in illness.	In the nurse patient relationship, the nurse: observes the patient in need validates inference decides if she can meet the need or must defer plans nursing course of action evaluates extent to which need met.
Orem Self help agency	Man a self care agent Man need for self care provision & maintenance is continuous & is linked to his environment Man & environment form an integrated functional whole or system.	Assist individual achieve a health result whether sick or well	Patient as an individual has need for self care action & to manage self care on a continuous basis to sustain life & health, to recover from illness & injury & to cope with their effects	Nursing is contributed effort toward designing, providing and managing systems of therapeutic self care for individuals within their environments of daily living. Nursing is directed toward bringing about psychological adjustment so person will be better able to accept & live with disability and develop using his human potential.

Comparison of Theories of Nursing Practice - Continued

EDUCATOR	VALUES	GOAL	RECIPIENT OF CARE	PLANNED INTERVENTION
Peplau Interpersonal Relationships	Man has human needs	Acceptance of self	Conflict & frustration cause tension resolved by normal defense mechanisms or avoidance of problem leading to pathologic dynamisms & illness	Nurse is a resource person Nurse assists patient to accept self and to get along with others.
Orlando Symbolic Interpersonal Theory	Man has needs Distress occurs when unable to meet needs.	Help patient avoid or alleviate the stress of unmet need in order that patient can experience a sense of adequacy or wellbeing.	Individual has needs which must be met to maintain state of wellness.	Nurse initiates a process of helping the patient express the specific meaning of his behavior in order to ascertain his distress. Nurse helps patient explore the distress in order to ascertain the help he requires so that his distress may be relieved.
Abdellah 21 Nursing Problems: Patient Oriented	Man has basic needs: physical psychological social	Meet health needs & problems of patient	Response of patient to approach selected by nurse.	Nursing diagnosis is based on 21 nursing problems. Nature of nursing is dynamic, fluid.
Howland Nurse, patient doctor triad	Man is an adaptive system	Reduce any difference between the actual state of the patient and the desired atate	Limits are specified within which patient is to be maintained. Limits are subject to change as patient progresses or new information is obtained. Patient-signal source Monitor-doctor, nurse or monitor (mechanical) Patient as process responds to inputs from environment & regulator.	Interaction between patient & health team. Comparator compares actual state of patient as monitor observed with desired state; note differences. Regulatory function - select & carry out appropriate action

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EDUCATIONAL CONCEPTS - NURSING
PRE-TEST

I. TRUE-FALSE (Correct any "False" statement)

_____ 1. There are commonalities in nurse educators' perceptions of the nature of nursing practice.

_____ 2. The theoretical framework serves as a guide to the selection and placement of courses and learning experiences in the nursing curriculum and operationalizes accountability in relation to the curriculum.

_____ 3. All conceptual framework curricula are integrated, but not all integrated curricula are conceptually based.

_____ 4. A theory of nursing would be represented by a set of statements, based on sound and replicable research, which would permit one to predict how particular changes in the clinical environment would affect nursing care.

_____ 5. The National League for Nursing criteria for the evaluation of educational programs in nursing leading to an associate degree require that the conceptual framework of the program of learning be clearly stated.

II. Place the most appropriate response from the word list in the blank space of each of the following sentences. Choose from among the following words.

Concept	Lateral	Process
Conceptual	Learner	Society
Construct	Nursing experts	Theory
Criteria	Premise	Vertical
Horizontal	Proposition	

1. In structuring a curriculum according to Ralph Tyler, three elements to be considered are _____, _____, and _____.

2. The _____ framework defines the components to be integrated and that consistency in these components be maintained in each level of the nursing curriculum.

3. _____ can be described as word symbols, abstract ideas that give meaning to our sense perceptions and permit generalization.

4. A _____ is a set of interrelated constructs, definitions and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena.

EDUCATIONAL CONCEPTS - NURSING
Pre-Assessment Test
Page 2

III. Match the name of the nurse educator to the theory of nursing practice she postulates.

NURSE EDUCATOR	THEORY OF NURSING PRACTICE
_____ Abdellah	a. Self help system
_____ Rogers	b. Interpersonal relationships system
_____ Orem	c. Behavioral system
_____ Roy	d. Developmental theory system
_____ Peplau	e. Triad system
_____ Johnson	f. Life processes ststem
_____ Travelbee	g. Symbolic interaction theory
_____ Howland	h. Adaptation theory
_____ Orlando	i. 21 nursing problems

APPENDIX C

CRITERION: NURSING EDUCATION CONCEPTS - PRE AND POST ASSESSMENT

I. 1. List the commonalities in nine different theories of nursing practice described by nurse educators.

2. State the purpose of a conceptual framework in developing and/or revising the curriculum of an Associate Degree Nursing Program.

3. Specify whether all integrated nursing curricula are conceptually based.

4. List the purpose (s) of a theory of nursing practice.

5. Discuss the criteria for evaluating the program of learning as stated in The Criteria for the Evaluation of Educational Programs in Nursing Leading to An Associate Degree.

II. 1. Classify three elements that are considered in structuring and/or revising a nursing curriculum.

2. Determine the value, utilization and potentiality of the conceptual framework in the nursing program.

3. Define the term concept.

4. Define the term theory.

III. Differentiate between the theories of nursing practice described by the following nurse educators:

1. Abdellah

2. Rogers

3. Orem

4. Roy

5. Pepleau

6. Johnson

7. Travelbee

8. Howland

9. Orlando

APPENDIX D

STUDENT EVALUATION OF INSTRUCTIONAL SEQUENCE - EDUCATIONAL CONCEPTS : REVISION DATA

An assessment of your perceptions of this self instructional sequence will facilitate the evaluation of its relative merit and guide revision for future use.

Please check the statement most descriptive of your feelings following completion of this instructional sequence.

1. Do you consider the material dealt with in this instructional sequence as relevant to your present or future needs as a nursing faculty member?

   _____ YES _____ NO

2. The instructional sequence is:

   _____ clear and to the point
   _____ somewhat clear
   _____ unclear

3. The instructional sequence is:

   _____ a waste of time and energy
   _____ focused on the intent of the objectives of the instructional sequence

4. The principles and concepts described in the instructional sequence are:

   _____ vague and confusing
   _____ concise and to the point

5. I prefer to learn by:

   _____ lecture
   _____ discussion
   _____ use of self paced programmed instruction

6. Overall, I would rate the instructional sequence:

   _____ poor
   _____ fair
   _____ good
   _____ very good
   _____ excellent

7. ADDITIONAL COMMENTS

APPENDIX E

PRE AND POST TEST RESPONSES OF FULL TIME NURSING INSTRUCTORS

ITEM	PARTICIPANT 1		2		3		4		5		6		TOTALS	
1.	1	1	1	1	1	1	1	1	1	1	1	1	6	6
2.	1	1	1	1	1	0	1	0	1	0	1	0	6	3
3.	1	1	1	1	1	1	1	1	0	0	1	1	5	5
4.	1	1	1	1	1	1	1	1	0	0	1	1	5	5
5.	1	1	1	1	1	1	1	1	1	1	1	1	6	6
II 1. concept					1								1	
conceptual							1						1	
construct														
criteria			1								1		2	
horizontal														
lateral														
learner	1	1	1	1	1	1		1		1	1	1	4	6
nsg. Xpert		1		1		1		1		1		1		6
premise							1		1				2	
proposition									1				1	
process	1								1		1		3	
society	1	1		1		1		1		1		1	1	6
theory			1		1		1						3	
vertical														
TOTAL	3	3	3	3	3	3	3	3	3	3	3	3	18	18

PRE AND POST TEST RESPONSES OF FULL TIME NURSING INSTRUCTORS - CONTINUED

II. 2.

ITEM / PARTICIPANT	1		2		3		4		5		6		TOTALS	
concept														
conceptual	1	1	1	1	1	1	1	1	1	1	1	1	6	6
construct														
criteria														
horizontal														
lateral														
learner														
nsg Xpert														
premise														
proposition														
process														
society														
theory														
vertical														
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	6	6

II. 3.

concept	1	1	1	1.	1		1	1	1	1	1		6	4
conceptual														
construct					1									1
criteria														
horizontal														
lateral														
learner														
nsg Xpert														
premise												1		1
proposition														
process														
society														
theory														
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	6	6

PRE AND POST TEST RESPONSES OF FULL TIME NURSING INSTRUCTORS - CONTINUED

ITEM	PARTICIPANT	1		2		3		4		5		6		TOTALS	
II.4	concept														
	construct		1												1
	criteria														
	horizontal														
	lateral														
	learner														
	nsg Xpert														
	premise					1	1					1		2	1
	proposition												1		1
	process			1					1					1	1
	society														
	theory	1			1			1		1	1			3	2
	vertical														
	TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	6	6
III.	Abdellah	1	1	1	1	1	1	1	1	1	1	1	1	6	6
	Rogers	0	1	0	1	0	1	0	1	0	1	0	1	0	6
	Orem	0	1	0	1	-	1	-	1	-	1	-	1		6
	Roy	0	1	0	1	0	1	0	1	0	1	0	1	0	6
	Pepleau	1	1	1	1	1	1	0	1	0	1	1	1	4	6
	Johnson	0	1	0	1	0	1	0	1	0	1	0	1	0	6
	Travelbee	0	1	0	1	0	1	0	1	0	1	0	1	0	6
	Howland	0	1	0	1	0	1	0	1	0	1	0	1	0	6
	Orlando	0	1	0	1	0	1	0	1	0	1	0	1	0	6
	TOTAL	2	9	2	9	2	9	1	9	1	9	1	9	10	54

PRE AND POST TEST RESPONSES OF PART TIME NURSING INSTRUCTORS

ITEM	PARTICIPANT 1		2		3		4		5		6		TOTALS	
I. 1.	1	1	1	1	1	1	0	1	1	1	1	1	5	6
2.		1	1	1	1	1	1	1	1	1	0	1	4	6
3.	1	1	1	1	1	1	0	1	0	0	1	1	4	6
4.	1	1	0	1	0	0	1	1	1	1	1	1	4	6
5.	1	1	0	1	1	1	1	1	1	1	1	1	5	6
II. 1 concept							1						1	
conceptual														
construct														
criteria			1		1		1		1		1		5	
horizontal														
lateral														
learner	1	1	1	1		1		1	1	1		1	3	6
nsg Xpert		1	1	1		1		1		1		1	1	6
premise											1		1	
proposition														
process							1						1	
society	1	1	1	1	1	1		1		1		1	3	6
theory					1								1	
vertical														
TOTAL	2	3	4	3	3	3	3	3	2	3	2	3		

PRE AND POST TEST RESPONSES OF PART TIME NURSING INSTRUCTORS - CONTINUED

ITEM PARTICIPANT

II. 2

	1		2		3		4		5		6		TOTALS	
concept														
conceptual	1	1	1	1	1	1	1	1	1	1	1	1	6	6
construct														
criteria														
horizontal														
lateral														
learner														
nsg Xpert														
premise														
proposition														
process														
society														
theory														
vertical														
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	6	6

II. 3

concept	1	1		1	1	1		1	1	1	1	1	4	6
conceptual														
construct							1						1	
criteria			1										1	
horizontal														
lateral														
learner														
nsg Xpert														
premise														
proposition														
process														
society														
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	6	6

PRE AND POST TEST RESPONSES OF PART TIME NURSING INSTRUCTORS - CONTINUED

ITEM	PARTICIPANT	1		2		3		4		5		6		TOTALS	
II.4	concept														
	conceptual														
	construct														
	criteria														
	horizontal														
	lateral														
	learner														
	nsg Xpert														
	premise			1		1								2	
	proposition									1				1	
	process														
	society														
	theory	1	1		1		1	1	1		1	1	1	3	6
	TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	6	6
III.	Abdellah	0	1	1	1	1	1	1	1	0	1	1	1	4	6
	Rogers	0	1	0	1	0	1	1	1	0	1	0	1	1	6
	Orem	0	1	0	1	1	1	1	1	1	1	0	1	3	6
	Roy	0	1	0	1	1	1	0	1	0	1	0	1	1	6
	Pepleau	0	1	0	1	0	1	1	1	0	1	1	1	2	6
	Johnson	0	1	0	1	0	1	0	1	0	1	0	1	0	6
	Travelbee	0	1	0	1	0	1	0	1	0	1	0	1	0	6
	Howland	0	1	0	1	0	1	0	1	1	1	0	1	1	6
	Orlando	0	1	0	1	0	1	0	1	0	1	1	1	1	6
	TOTAL	0	9	1	9	3	9	4	9	2	9	3	9	13	54

PRE AND POST TEST RESPONSES OF PART TIME NURSING INSTRUCTORS

ITEM	PARTICIPANT 1		2		3		4		5		6		TOTALS	
1.	1	1	1	1	1	1	0	1	1	1	1	1	5	6
2.	1	1	1	1	1	1	1	1	1	1	1	1	6	6
3.	1	0	1	1	0	1	1	1	1	0	0	1	4	6
4.	1	1	1	1	1	1	1	1	1	1	1	1	6	6
5.	1	1	1	1	1	1	1	1	1	1	1	1	6	6
II. 1 .concept	1	1	1	0	1	0	1	0	1	1	1	0	6	2
conceptual														
construct		1												1
criteria	1		1	1			1					1	3	2
horizontal														
lateral														
learner				1	1	1		1					1	3
nsg Xpert						1		1						2
premise							1				1	1	2	1
proposition														
process									1				1	
society				1		1		1		1				4
theory	1	1	1		1				1	1	1	1	5	3
vertical														
TOTAL	3	3	3	3	3	3	3	3	3	3	3	3	18	18

PRE AND POST TEST RESPONSES OF BACCALAUREATE GRADUATE PARTICIPANTS - CONTINUED

II. 2.

ITEM	PARTICIPANT 1		2		3		4		5		6		TOTAL	
concept														
conceptual	1	1	1	1	1	1	1	1		1	1	1	5	6
construct									1				1	
criteria														
horizontal														
lateral														
learner														
nsg Xpert														
premise														
proposition														
process														
society														
theory														
vertical														
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	6	6

II. 3.

concept					1	1	1	1			1		1	3
conceptual														
construct		1											1	
criteria														
horizontal														
lateral														
learner														
nsg Xpert														
premise	1						1						2	
proposition			1	1									1	1
process									1					1
society														
theory											1			
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	5	5

PRE AND POST TEST RESPONSES OF BACCALAUREATE GRADUATE PARTICIPANTS - CONTINUED

ITEM PARTICIPANT

II. 4.

	1		2		3		4		5		6		TOTAL	
concept									1				1	
conceptual														
construct														
criteria									1				1	
horizontal														
lateral														
learner														
nsg Xpert														
premise					1						1		2	
proposition														
process		1												
society														
theory	1		1	1		1	1	1				1	3	4
TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	6v	4

III.

Abdellah	0	1	0	1	0	1	1	1	0	1	0	1	1	6
Rogers	0	1	0	1	0	1	0	1	0	0	0	1	0	5
Orem	0	1	0	1	0	0	0	1	0	0	0	1	0	4
Roy	0	1	0	1	0	1	0	1	0	1	0	0	0	5
Pepleau	0	0	0	0	0	0	0	1	0	1	0	1	0	3
Johnson	0	1	0	1	0	1	0	1	0	0	0	1	0	5
Travelbee	0	0	0	0	0	0	1	1	0	0	0	0	1	1
Howland	0	1	0	0	1	1	0	1	0	1	0	1	1	5
Orlando	0	1	0	1	1	0	0	1	0	1	0	1	1	5
TOTAL	0	7	0	6	2	5	2	9	0	5	0	7	4	39

APPENDIX F
SUMMARIZATION OF EVALUATION SHEETS

STATEMENT	FULL TIME NURSING INSTRUCTOR	PART TIME NURSING INSTRUCTOR	BACCALAUREATE GRADUATE
1. Do you consider the material dealt with in the instructional sequence as relevant to your present or future needs as a nursing faculty member?			
a. Yes	5	6	3
b. No			3
2. The instructional sequence is:			
a. Clear and to the point	2	5	3
b. Somewhat clear	3	1	3
c. Unclear			
3. The instructional sequence is:			
a. A waste of time and energy		1	3
b. Focused on the intent of the objectives of the instructional sequence	5	5	3
4. The principles and concepts described in the instructional sequence are:			
a. Vague and confusing			1
b. Concise and to the point	5	6	5
5. I prefer to learn by:			
a. Lecture	2	4	2
b. Discussion	2	5	2
c. Use of self-paced programmed instruction	2	5	3
6. Overall, I would rate the instructional sequence:			
a. Poor			
b. Fair			
c. Good	1	2	2
d. Very good	2	2	3
e. Excellent	2	2	1

APPENDIX G
SUMMARIZATION OF EVALUATION COMMENTS

POSITIVE COMMENTS

FULL TIME NURSING INSTRUCTORS:

1. Very helpful to me in acquiring a basic understanding.
2. A wealth of information was made available that would have taken hours of research on my part.
3. Summarization of the various theories (eg. comparison) especially interesting and comprehensible. Facilitates application in practice for learner.
4. I stated that the principles are vague and confusing mainly because I am generally unfamiliar with the terminology and so not work with it consistently.
5. I cannot learn quickly. I require a great deal of time in my reading and often have to reread for full understanding.
6. Personnally need to delve more deeply into the theories of nursing practice.
7. Data in Supplement B is pertinent to curriculum development.
8. I still feel a need for some more personal guidance in implementing what I have learned. There is a need for more study on my part. The fact that the first five questions were very hard for me to answer (even with referring back) worries me, I feel I must not understand this as I should.

PART TIME NURSING INSTRUCTORS:

1. Worthwhile - easy access to current nursing education information.
2. Instructional sequence will be of inestimable value to faculty of any type nursing program.
3. I like being able to work on the sequence at home.

BACCALAUREATE GRADUATE:

1. Some of the ideas I can use as a teacher.
2. A programmed text would be useful for learning about educational objectives.

SUMMARIZATION OF EVALUATION COMMENTS - CONTINUED

NEGATIVE COMMENTS

FULL TIME NURSING INSTRUCTORS

1. In instructions to students are three frames necessary for preview?

2. I had difficulty seeing the relationship of Supplement B with objectives. All of the data is pertinent but the first objective states only that the learner will define terms.

PART TIME NURSING INSTRUCTORS

1. Needed to spend more time than two hours.

2. Superfluous as I would use this program as a quick information guide and not for indepth study.

BACCALAUREATE GRADUATE

1. Paragraph and word structure too long.

2. I think too much material was covered to effectively be self-paced.

3. Descriptions are too long.

4. There are too many ideas, names etc. to integrate, especially if one is unfamiliar with the terms and names used.

APPENDIX H

LEARNING OUTCOMES FOR THE INSTRUCTIONAL SEQUENCE

I. Define pertinent educational terms used in describing the nursing curriculum.

A. Classify three elements that are considered in structuring and/or revising a nursing curriculum.

B. Define the term concept.

C. Define the term theory.

II. Assess the value, utilization and potentiality of a conceptual framework as essential to the development of the nursing program.

A. State the purpose of a conceptual framework in developing and/or revising the curriculum of an Associate Degree Nursing Program.

B. Specify whether all integrated nursing curricula are conceptually based.

C. Determine the value, utilization and potentiality of the conceptual framework in the nursing curriculum.

III. Compare the current major theories of nursing practice.

A. List the commonalities in nine different theories of nursing practice described by nurse educators.

B. Differentiate between the theories of nursing practice described by the following nurse educators.

1. Abdellah
2. Rogers
3. Orem
4. Roy
5. Pepleau
6. Johnson
7. Travelbee
8. Howland
9. Orlando

IV. Discuss the purpose of a conceptual framework according to The Criteria for Self-evaluation of Educational Programs in Nursing Leading to An Associate Degree.

A. Discuss the criteria for evaluating the program of learning as stated in The Criteria for the Evaluation of Educational Programs in Nursing Leading to An Associate Degree.

B. List the purpose (s) of a theory of nursing practice.

APPENDIX I

TABLE OF SPECIFICATIONS

INSTRUCTIONAL OBJECTIVE	UNDERSTANDING OF				TOTAL ITEMS
	TERMS	FACTS	CONCEPTS	PRINCIPLES	
EDUCATIONAL TERMS	2		3		5
CONCEPTUAL FRAMEWORK				3	3
THEORIES OF NURSING PRACTICE			10		10
CRITERIA		1		1	2
TOTAL	2	1	13	4	20

APPENDIX J

EDUCATIONAL CONCEPTS - NURSING
POST TEST

I. TRUE-FALSE (Correct any "False" statement)

_____ 1. There are commonalities in nurse educators' perceptions of the nature of nursing practice.

_____ 2. The theoretical framework serves as a guide to the selection and placement of courses and learning experiences in the nursing curriculum and operationalizes accountability in relation to the curriculum.

_____ 3. All conceptual framework curricula are integrated, but not all integrated curricula are conceptually based.

_____ 4. A theory of nursing would be represented by a set of statements, based on sound and replicable research, which would permit one to predict how particular changes in the clinical environment would affect nursing care.

_____ 5. The National League for Nursing Criteria for the Evaluation of Educational Programs in Nursing Leading to An Associate Degree require that the conceptual framework of the program of learning be clearly stated.

II. Place the most appropriate response from the word list in the blank space of each of the following sentences. Choose from among the following words.

Concept	Lateral	Process
Conceptual	Learner	Society
Construct	Nursing experts	Theory
Criteria	Premise	Vertical
Horizontal	Proposition	

1. In structuring a curriculum according to Ralph Tyler, three elements to be considered are _____, _____, and _____.

2. The _____ framework defines the components to be integrated and that consistency in these components be maintained in each level of the nursing curriculum.

3. _____ can be described as word symbols, abstract ideas that give meaning to our sense perceptions and permit generalization.

4. A _____ is a set of interrelated constructs, definitions and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena.

EDUCATIONAL CONCEPTS - NURSING
Post Assessment Test
Page 2

III. Match the name of the nurse educator to the theory of nursing practice she postulates.

NURSE EDUCATOR	THEORY OF NURSING PRACTICE
_____ Abdellah	a. Self help system
_____ Rogers	b. Interpersonal relationships system
_____ Orem	c. Behavioral system
_____ Roy	d. Developmental theory system
_____ Peplau	e. Triad system
_____ Johnson	f. Life process system
_____ Travelbee	g. Symbolic interaction theory
_____ Howland	h. Adaptation system
_____ Orlando	i. 21 Nursing problems

KEY: 1 correct response
0 incorrect response
- no response

ITEM ANALYSIS CHART SHOWING CORRECT (1), INCORRECT (0) AND NO RESPONSE (-) BEFORE AND AFTER COMPLETING AN INSTRUCTIONAL SEQUENCE ON NURSING EDUCATION CONCEPTS

TEST ITEM	SECTION I					SECTION II						SECTION III										PRETEST CORRECT RESPONSE	PERCENT CORRECT	POSTTEST CORRECT RESPONSE	PERCENT CORRECT	PERCENT GAIN
	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20							
PRE AND POST TEST	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B						
PARTICIPANT 1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	0	1	1	1	0	1	0	1	0	1						
2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0	1	1	1	0	1	0	1	-	1	1	1	-	1	-	1	-	1	12	60 %	19	95 %	35 %	
3	1	1	1	0	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	0	0	0	1	1	0	1	0	1	-	1	1	1	-	1	-	1	-	1	10	50 %	20	100 %	50 %	
4	1	1	1	0	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	1	1	0	1	1	0	1	0	1	0	0	0	1	-	-	-	-	-	-	9	45 %	12	60 %	15 %	
5	1	1	1	1	0	0	0	0	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	9	45 %	18	90 %	45 %	
6	1	1	-	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	-	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	7	35 %	17	85 %	50 %	
7	1	1	-	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	8	40 %	18	90 %	50 %	
8	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	8	40 %	20	100 %	60 %	
9	1	1	1	1	1	0	0	1	1	0	1	0	1	1	1	1	1	1	0	1	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	8	40 %	20	100 %	60 %	
10	0	1	1	1	0	1	1	1	1	1	0	1	0	1	0	1	1	1	0	1	1	1	1	1	0	1	1	1	0	1	0	1	0	1	0	1	0	1	10	50 %	19	95 %	45 %	
11	1	1	1	1	0	0	1	1	1	1	1	1	0	1	0	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	0	1	0	1	1	1	0	1	10	50 %	20	100 %	50 %	
12	1	1	0	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	0	1	0	1	0	1	1	1	9	45 %	19	95 %	50 %	
13	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	1	0	1	-	1	-	1	-	1	-	1	-	1	8	40 %	20	100 %	60 %	
14	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	1	1	1	0	0	1	0	0	1	0	1	0	1	-	1	0	1	0	0	0	1	0	1	7	35 %	12	60 %	25 %	
15	1	1	1	1	0	1	1	1	1	1	0	1	0	1	0	1	1	1	1	1	0	1	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	1	7	35 %	15	75 %	40 %	
16	0	1	1	1	1	1	1	1	0	1	0	1	0	1	0	1	1	1	1	1	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	6	30 %	15	75 %	40 %	
17	1	1	1	1	1	0	1	1	1	1	0	1	0	1	0	1	1	1	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	7	35 %	20	100 %	65 %	
18	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	1	0	1	0	0	0	1	0	0	0	1	0	1	5	25 %	10	50 %	25 %	
	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	1	0	0	0	1	0	1	5	25 %	12	60 %	35 %	

APPENDIX L

SUMMARIZATION OF CORRECT RESPONSES ON THE PRE AND POST TEST FOLLOWING COMPLETION OF AN INSTRUCTIONAL SEQUENCE ON NURSING EDUCATION CONCEPTS

RESPONDENT NUMBER	PRE INSTRUCTION SCORE	POST INSTRUCTION SCORE	POINT GAIN
1	7	20	14
2	8	20	12
3	8	20	12
4	8	20	12
5	10	20	10
6	10	20	10
7	9	19	10
8	8	18	10
9	7	17	10
10	10	19	9
11	9	18	9
12	6	15	9
13	7	15	8
14	12	19	7
15	5	12	7
16	7	12	5
17	5	10	5
18	9	12	3

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